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FOUNDED 1880
BY
DANIEL STERN
Thoroughly Covers
The Hardware, Stove, Sheet Metal, and Warm Air Heating and Ventilating Interests

AMERICAN ARTISAN and Hardware Record

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TERMS OF SUBSCRIPTION IN THE UNITED STATES AND ITS POSSESSIONS (Invariably in Advance) ONE YEAR POSTAGE PAID $2.00
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Two consumption taxes are being considered, to take the place of the Excess Profits Tax which was enacted into law by Congress during the great war, and which, it is now recognized, has been instrumental in pulling capital out of active investment channels, and therefore has its share of responsibility for the present stagnation of business.

Proposed Turnover Tax Is Very Objectionable

The first of these measures proposes a certain percentage on every turnover. The figure most frequently quoted is one per cent for tax.

Suppose that this proposition actually became a law.

The Federal Government would then collect one per cent on the sale of a ton of iron ore by a mining corporation to a manufacturer of pig iron. This manufacturer would, of course, add that tax to his cost and tack on a bit more to "cover overhead," when he sold his "pigs" to a maker of steel bars.

The latter has then 1.21 per cent to add to his cost plus the extra item for overhead when he sells his bars to a tool manufacturer.

The tool manufacturer is Number three on the list. He has to pay one per cent on his selling price, which includes the two one per cent taxes plus their profits and the accumulated overhead costs all of which were naturally increased because of the turnover sales tax.

The wholesaler is Number four to pay and the retail hardware dealer is Number five. In each case, there is an extra item to be added to the cost.

It is, therefore, not unreasonable to estimate that the cost to the actual ultimate consumer—the mechanic or the householder—will be increased by at least five per cent.

Take, on the other hand, a tool manufacturer, who buys his "pigs," converts them into saws, for example, and sells them direct to the consumer. He has only two turnover taxes to figure into his selling price, so that this law would tend to give him an undue advantage over everybody in the business of manufacturing, wholesaling or retailing of saws.

The other proposition is that of the so-called "Final Sales Tax" of one per cent.

Should this law be enacted, we would be up against the problem of deciding when the "final sale" is made.

For example, consider the spark plug. An automobile manufacturer buys a hundred thousand of them at a quantity price from the manufacturer and places them in his automobiles. This might be considered as a "final sale," and each spark plug would yield a tax of, say, 1/3 cent to Uncle Sam.

On the other hand, a hardware dealer buys a gross of them and sells each one for 75 cents so that the automobile owner would have to pay—theoretically, of course—¾ cent in tax on the same article.

Fayette R. Plumb, past president of the American Hardware Manufacturers' Association, and chairman of the Tax Committee of the National Industrial Conference Board, in a recent article points out several other inconsistencies in both propositions and makes two constructive recommendations, as follows:

"If sales taxes are to be levied at all it would be better to select certain specific commodities which are in such widespread use and constant demand that their sale would not be seriously affected by the tax and levy the tax upon their sale once, selecting the point at which it could be best collected by the Government. The present tax on tobacco is an example.

"Rather than to extend sales taxes, it

would, however, cause less disturbance to business to replace the revenue lost by the repeal of the excess profits tax and the reduction of the high surtaxes on personal income by an increase in the present corporation income tax and increases in customs duties. Even if it is necessary to impose new sales taxes in addition to the present ones, let them be imposed only after careful investigation of their effect on each particular commodity to be taxed."

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Prices Are Returning to Normalcy

There has been much discussion about the lack of business and much "alibiing" during the past six months.

Many of those who have lain down on the job in the matter of aggressiveness have seized upon the supposedly low prices on farm products as the chief reason for the present dullness.

They say that there must be a re-adjustment of prices of manufactured products, that steel and iron, for example, must be reduced in cost so as to be on the same level as wheat, corn, hogs, etc., before the farmer will resume buying.

And yet—when we come down to actual figures—these prices are today much closer to such a level than most people imagine.

In fact, as shown by one of the best known authorities on matters of price fluctuation, Mr. John W. Hill, Financial Editor of "The Iron Trade Review," the average Chicago price of wheat during the 16-year period from 1905 to 1920 was $1.36 per bushel, while the February 28th figure was $1.71—a gain of 25.7 per cent.

Pig iron prices for the same dates, as quoted by Mr. Hill were $20.61 and $25 per ton respectively—a gain of only 21.3 per cent.

Hogs averaged for the same period $8.75 per 100 pounds as against $10.00—a gain of 14.3 per cent.

Corn, however, does not make as good a showing, the respective figures being 85 cents, 68 cents and a loss of 20 per cent.

Looking at these comparative prices in a manner which probably may come a little close home, we find that in 1907 a ton of pig iron would buy 31½ bushels of wheat, while in 1915 it would buy only 8½ bushels, and in February, 1921, you could buy 15 bushels.

The average value of pig iron, as expressed in hogs in the period between 1909 and 1915 was approximately 150 pounds, live weight. In 1917 a ton of pig iron could buy 350 pounds, and in February, 1921, it would pay for approximately 250 pounds, which is very close to the average figure for the sixteen-year period from 1905 to 1920.

Retail hardware dealers, traveling salesmen and others who have the job of overcoming the present disinclination to buy on their hands, may well make use of the foregoing figures, and thereby help themselves materially, for the present condition is in many respects based upon what a former president of the United States termed a "state of mind" rather than upon real facts.

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Educate by Advertising

A forceful and convincing example of what educational advertising will do is given in a speech by Ivy L. Lee, adviser in publicity, at the annual meeting of the New York section of the Amercian Institute of Mining and Metallurgical Engineers. He points out that twelve years ago aluminum was a drug on the market. Among retailers of kitchen utensils it was known as "lemon metal." It was used for only about one-quarter of one per cent of the utensils in the United States.

Under improved processes of manufacture a good grade of aluminum was produced, says Mr. Lee, but so evil was the metal's reputation with housewives that it could not be sold. So a campaign of education was planned and carried out.

Today aluminum is used for more than fifty per cent of the utensils in this country, and the demand for it is steadily increasing.

Another striking illustration is given by Mr. Lee in the case of Armco iron. "Who ever heard of Armco iron until the American Rolling Mills Company began to placard the country with its merits, to get its message into every manufacturing establishment and every home in the country?" Mr. Lee asks.

"In 1914, when its publicity effort began, its output was 25,000 tons per year," he tells us. "Today the output is 200,000 tons per year, and this will be increased as soon as additional mills, now being built, are completed."

Random Notes and Sketches

By Sidney Arnold

I had a very fine letter this week from my old friend Fred E. Muzzy, who for so many years sold Stevens guns and ammunition and attended every retail hardware convention that he could possibly get to.

Fred, as many of you know, has retired from the selling "game," but is still active, being one of the principal owners of a big Silver Fox breeding station up in Prince Edward Island, Canada, where they raise the sort of foxes whose skins average around a thousand dollars each.

* * *

My friend Bennett Chapple, who lives at Middletown, Ohio, believes that unless a man has actually been brought to see your proposition in the same favorable light that you have—as viewed from his standpoint—you will not make a real sale, although you may press him so hard that he will sign on the dotted line.

In other words—Chapple says—salesmanship does not consist in power of persuasion so much as in the ability so to present the advantages of your article that the prospect creates within himself a desire to possess the article you want to sell. Then—and only then—can it be said that a really satisfactory sale has been made.

I had intended to spend only about half an hour with Mr. Chapple one morning in February, in order to secure some information about Armco Ingot Iron, but instead of the half hour three hours were gone before I realized it—and without regretting the extra time came away with the conviction that Chapple believes so thoroughly in the merits of this product that some day he is going to help sell a Peerless Warm Air Furnace or a Quick Meal Range, both of which are made of Armco Ingot Iron, to Judge Gary, of the United States Steel Corporation.

* * *

All sorts of things can happen in a spring garden, says my friend H. E. Doherty of the Safety Furnace Pipe Company, Detroit, Michigan, ex-President Michigan Salesmen's Auxiliary.

Here is an incident which he narrates by way of example:

Mrs. Newlywed was versed not at all in the art of cookery and especially bakery, but the time came when she felt duty bound to make an attempt at baking bread.

Whereupon the various ingredients called for in the recipe were put together and the whole set to rise.

But rise it would not and the weather being pleasant the good wife thought best to bury her mistake in the garden.

A shallow depression was made and the batch of dough covered with dirt.

Next day friend hubby went to the garden to clean it off preparatory to putting in the early vegetables when suddenly he frightened Mrs. Newlywed out of a year's growth by letting out a yell not unlike an Indian war whoop and finished by saying:

"O Honey Bunch, look what I found! A mush-room as big as a dish pan." And Honey Bunch was too busy with her work to come look.

The warm sunshine had caused the dough to rise.

* * *

As an example of a quick retort, the following is sent me by George B. Carr of Carr Supply Company, Chicago, Illinois:

A reporter was trying to interview the firm of Smith and Jones during the rush of day before Christmas. "Get out!" growled Smith, "I've no time for you."

"Could I see Mr. Jones?" cooed the reporter, unaware of the fact that Jones was deceased.

"Jones is in heaven," was the retort. "You'll never see him!"

* * *

Paul E. Heller of Heller Brothers Company, Newark. New Jersey, tells about a lawyer whose arrogance often blunted his astuteness.

He was proceeding with a cross-examination:

"You say," he inquired of the witness, "that you have crossed the Atlantic seven times?"

"Yes, sir"

"And where were you born?"

"Here in New York."

"Then, sir," thundered the lawyer, "if you were born in New York and have crossed the Atlantic seven times, how does it happen that you aren't on the other side at this moment? Answer me that!"

"Well, sir," responded the little man on the stand. "you see, on my last trip I came home by way of Siberia and the Pacific Ocean."

* * *

It is a far cry from the old lonely trails of the woods and plains to the complex interests of the city street.

The street is the dictionary of the city. It holds the definition of every form of commerce and of all the twists and turns of human nature.

It is the expression of the folk in their multiple relations. It is the avenue through which shop and factory and field and woods send their output into the marts and homes.

The street has enough of romance and science and invention and life and hope to furnish material for all the books that may ever be written. Here is one of its countless phases set forth in verse:

The Street.

A street is but a thoroughfare
With houses rising here and there,
And creaking signs and swaying doors
And jumbled rows of shops and stores.
A street is but a way that goes
Where no one cares and no one knows,
And where folk hurry, straight or bowed,
Old, young, commingled in the crowd.

A street is but a narrow place
Where we meet strangers face to face,
Where people babble of the news,
What time each his hope pursues;
One street—another—all the same
Save for the width or kind or name.
A million streets there are and more,
That lie between the house and store.

Why, bless us, it is but a street
That mutters of the tramping feet;
A place, a way, a common path—
And yet it tells of joy and wrath
And failure, and of happiness,
Of woe, and of some one's success.
Ah, did we know of all we see,
How different each street might be!

Up-to-the-Minute News Siftings

Items of Interest to Dealers Gleaned from Many Fields. National and Local Business Plans, Problems, and Practices.

EXPLAINS THE TEST OF COOKING RANGES.

(*Continued from last week.*)

The method of making a test for oven efficiency is to light the fire with a weighed quantity of fuel, and set the constant stream of water running through the coil. Constant observations are made of the temperature of inlet and outlet. Of these temperatures the inlet is approximately constant, and the rise of temperature is a measure of intensity of the heating effect at any one time. By prolonging the experiment and taking constant note of the outlet temperature, it is possible to record the performance of the oven throughout the whole range. During the test the intensity is regulated as far as possible to a constant value for as long a period as possible, but it is found in practice to be impossible to maintain anything resembling real constancy. During this period the fire is stoked in one of two ways. The first method is at regular intervals by equal quantities of fuel.

The second method is to put the fuel on as required, each stoking being weighed, the criterion being the outlet temperature of the coil at the time, and the object being to keep this value constant.

When the whole of the observations are complete, it is possible to compare the total amount of heat communicated to the coil with that in the fuel burnt to procure the result, and this is the value with suitable corrections which we have given as the efficiency.

This method has the great merit of being equally applicable to all kinds of oven—solid fuel, gas, or electricity. It certainly does afford a very sound basis, for it is found that the results can be repeated time after time from the same range similarly handled, which is the essential criterion of value of any experiments of this character.

There are many difficult considerations that arise during experiments of this kind, the nature of which I have indicated. By long experience we have established conventions which have overcome these difficulties to a large extent, and we are prepared with some confidence to establish the efficiency of any such appliance submitted to us after a comparatively short period of experimentation.

In making such experiments, it is necessary to assume that the part of the appliance tested is the only one which is required at the time. This is not in all cases true. Thus, when the oven is in use it frequently or generally happens that a certain amount of hot water is required at the same time. If we calculate the oven efficiency only, based on the total fuel used, we obviously neglect the amount of hot water produced at the same time.

It will be seen that this again is a very great difficulty, for it is possible to adjust the oven damper and the hot water damper independently in any one of a hundred different ways. Each of these would obviously cause a variation in the efficiency, and as each experiment lasts a whole day, it is clear that to attempt to define the efficiency in all permutations and combinations of damper openings, would be a tremendous task.

We have, therefore, adopted the convention that each function is sepaartely tested as though the other did not exist, but making observations as far as possible on the conditions obtained during the test in those other parts of the appliance. By calculating on these results it is possible to lay down the total efficiency of the entire appliance, but it must be observed that this figure only applies to the particular combination of damper openings which is in use at the time.

The efficiency of a hot plate is determined by loading the hot plate to its fullest capacity with copper vessels filled with a weighed quantity of water, and measuring the rate of rise of each one, and comparing the total heat communicated to the vessel all taken together with the total quantity of the fuel burnt. This experiment is also carried out over a long period.

The hot water supply is tested, as might be expected, by burning weighed quantities of fuel at a regular rate under the boiler, and measuring the rate of rise of temperature in a large cylinder connected to the boiler. The figures obtained by these methods are of great interest, and show how very low the efficiency of all such appliances is.

It is not possible in a short paper such as this to discuss the very many interesting and difficult points that have arisen in such a series of tests as this. What we have been anxious to do, and what we think we have done, is to determine the principles on which any such appliances may be tested, so that any manufacturer may measure the degree of success of his design in respect of fuel economy on a common basis, and it is to be hoped that in the course of time any manufacturer selling cooking ranges will be required to disclose the efficiency of use.

(*To be concluded next week.*)

Has Complete Stock of Stove, Range, and Furnace Repairs.

In practically every case where repair parts are wanted, promptness in filling orders is greatly desired.

This, of course, implies an adequate stock of supplies, making delays unnecessary.

The F. A. Klaine Company, Water and Central Avenue, Cincinnati, Ohio, carries a large and complete stock of stove, range, and furnace repairs, and offers in addition to prompt filling of orders the inducement of low prices. Catalog and prices may be had on request.

Service Department of Associated Manufacturers of Enameled Ware Gives Help in Making Window Displays.

Declares that One Idea at a Time in Your Window Will Carry Your Sales Message Better than a Mixed Window without an Idea.

The windows of some hardware stores look like a combination of department store, factory and garage, says the Service Department of the Associated Manufacturers of Enameled Ware.

It is true that live hardware stores are frequently all of these things, but trying to show too much in the window at one time defeats its own purpose. The passer-by gets the impression of a jumble rather than of goods which appeal particularly to him or her.

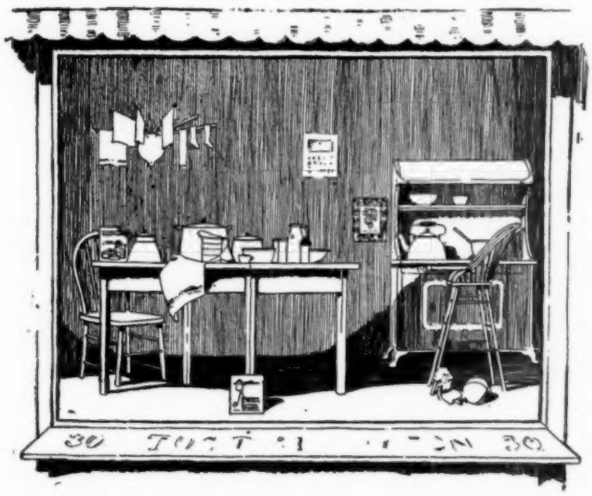
In order to show the value of the "One Idea" window, the Service Department of the Association Manufacturers of Enameled Ware, 46 Cedar Street, New York, is distributing to hardware stores special designs for window displays. The two displays being sent out were sketched by some of the leading window display men in the country, and clear directions are given for putting them up.

The outstanding feature of those displays is simplicity—each shows only enameled ware and related objects—not a jumble of tools, electric goods and tires.

One display requires no "properties" but a stove or box and some black cloth to drape over it. A single utensil is placed on this "pedestal" and a few other utensils are grouped around it. The featured piece may be changed each day, a special sale being held for it.

The other display is designed to appeal to mothers. The young mother, of course, is the most liberal kind of customer there is and she is the strong friend of the store which caters to her babies.

The window is fixed up to look like the corner of a kitchen in which baby's food is being prepared. On a kitchen table are placed a few enameled ware utensils, baby's bottles, etc., and there is a baby's high chair with a doll on it to make it look real.



Example of Simple Display to Attract the Housewife.

The idea of the window is to bring out the features of sanitary cleanliness of enameled ware.

Attractive window and counter display cards in two colors showing enameled ware in a catchy way are being sent out with the window displays.

Dainty housewives are pictured in each of the four cards and the phrase "Enameled Ware—the Clean Ware" is used as a slogan.

The directions for the display depicting a part of a kitchen are given by the Service Department as follows:

1. Show the corner of a kitchen being used for preparing baby's food. Make it look natural—use the right pieces of enameled ware.

2. Don't put in anything that doesn't belong in such a scene.

3. Put in a kitchen table (preferably white and with an enameled steel top), a kitchen chair (painted white if possible) and a baby's high chair.

4. As accessories, if you have a big window, put in a stove, kitchen cabinet or an ice box. On the wall you might have a little clothes dryer and perhaps a shelf with baby's basket scales.

5. On the table put the following pieces of enameled ware (white ware preferably): Double boiler, saucepans, measuring cups, large bowl with baby's bottles in, milk and pudding pans, funnel cups, small seamless bowls and a strainer. On the stove put a kettle and saucepan.

6. On the floor and the high chair put a doll or two, a ball or other toys to make the scene lifelike.

7. Put in some attractive display cards. Write for them to Service Department Associated Manufacturers of Enameled Ware, 46 Cedar Street, New York City.

Nothing is too good for the babies—and they need a lot of new things in the kitchen and all through the house for their special service.

Young mothers go to the stores which understand and cater to the wants of the youngsters.

That's why a fine display of clean, sanitary enameled ware will make a friend of the woman whose baby's things must be clean and sanitary.

What a surprise it will be for the young parents passing your store to find that you are thinking about the things which interest them most.

They'll get a new idea of your store as a home-making store which they wouldn't get if you cluttered up your window with everything under the sun—mostly unbabylike things such as hand saws, batteries and spare tubes.

Show one idea at a time and give your housefurnishings a chance. Even the men will like your store the better for it.

To make the extremely simple but gainful display of enameled ware illustrated in the drawing, six things need to be kept in mind, as follows:

1. A stool or box and a piece of black cloth or other dark material are all you need for the setting.

Drape the cloth over the stool in the center of the window—let the cloth be large enough to cover the rest of the window floor.

2. Around the bottom of the setting put a good assortment of enameled ware—enameled ware only, so as to keep the one idea plan. Do not put too many pieces—enough to show you carry a full line. Here's a good list:

Coffee pot	Mixing bowl
Dishpan	Spoon
Rice boiler	Pail
Sauce pans	Windsor dipper
Pudding pan	Colander

3. On top of the stool put one piece, say a kettle. Change this piece every day, putting the kettle down and putting up the double boiler, for instance.

4. Have a special sale on the article you feature—put up a price card.

A Gainful Window Display, Easy to Arrange.

5. Keep the background clear as you can, only putting up perhaps four or five other small household utensils, such as a meat chopper, pair of shears, etc. If you have side shelves, put up other household things, like jars, irons, etc.

6. Use a few attractive display cards.

The store window that "stands out" on the street and draws the crowd is the one that is "different."

The other stores clutter their windows with a jumble of everything they sell. Make your window different by making it simple.

"One idea at a time," in your window will carry your sales message better than a mixed window without an idea.

To bring the housewife into your store feature enameled ware, always a popular line of kitchen utensils.

Keep it a kitchen window—only things that appeal to the housewife. She is scared away by men's goods like saws and hammers which some hardware stores mix in with kitchen things.

The big idea is to have one big idea in your window at a time.

The high cost of price-cutting is one of the big subjects confronting the hardware trade, not only in the retail end but in others as well.

Outlook for Paint Sales Is Better Than Usual.

The general inclination on the part of building material interests to reduce prices to a low level that early spring builders will anticipate their requirements more than they would do otherwise, should prove a contributing factor to the increased sale of mixed paints and varnishes.

They offer inducement to the dealer to stock up his shelves, a thing which he has not yet shown much inclination to do in view of either hold-over stocks bought at high prices or the fear that the market has not yet touched bottom.

The dry color market continues to drift along about the same lethargic way it has for some time and although small orders are coming in right along and requests for prompt shipment indicate small stocks, the aggregate is not large and indicates that manufactured goods are not yet going out with any sort of freedom.

Prices have not shown any particular change except fractional advances or declines according to seller.

Despite the rather easy tone to pig lead, corroders show no disposition to lower their lead pigment prices.

While the demand for white lead is showing some improvement there is considerably less doing in the red oxides owing to the dullness in the rubber trade.

The demand for barytes is limited to small lots for prompt delivery and there is no improvement in the inquiry for blanc fixe.

The demand for zinc oxide is showing a gradual improvement, although still rather quiet, but producers show no disposition to change prices and are looking for a good spring trade.

Lithophone makers are still very firm in their ideas and report quite a good business passing as compared with many other lines, and expect that any good spring inquiry will take care of all available supplies.

There is still an easy tone to the market for varnish gums, with prices unsettled and showing a wide range in the absence of important demand.

Cables from the Far East report unstable conditions at primary points and importers are holding off and awaiting developments.

American Hardware Corporation Elects Officers and Directors.

At the annual meeting of the stockholders and directors of the American Hardware Corporation, New Britain, Connecticut, the following officers were elected:

President, Henry C. M. Thomson.

First Vice-president, Charles Glover.

Vice-presidents, B. A. Hawley, C. H. Baldwin and Charles B. Parsons.

Treasurer, I. D. Russell.

Assistant Treasurer, G. Ernest Root.

Secretary, George T. Kimball.

Directors, C. H. Baldwin, Philip Corbin, James S. Elton, Charles Glover, B. A. Hawley, George T. Kimball, Charles B. Parsons, Andrew J. Sloper, Charles F. Smith, Henry C. M. Thomson, Harris Whittemore and Meigs H. Whaples.

Good Ideas for Window Display

Practical Lessons from Exhibits in AMERICAN ARTISAN AND HARDWARE RECORD Window Display Competition. How to Get More Passers-By to Come into Your Store.

WINDOW EXHIBIT OF FIREPLACE GOODS DRAWS CUSTOMERS.

Principally for sentimental reasons, people continue to have fireplaces built in modern homes.

English literature abounds in beautiful reveries which have for their source and center the cheerful glow of the open hearth.

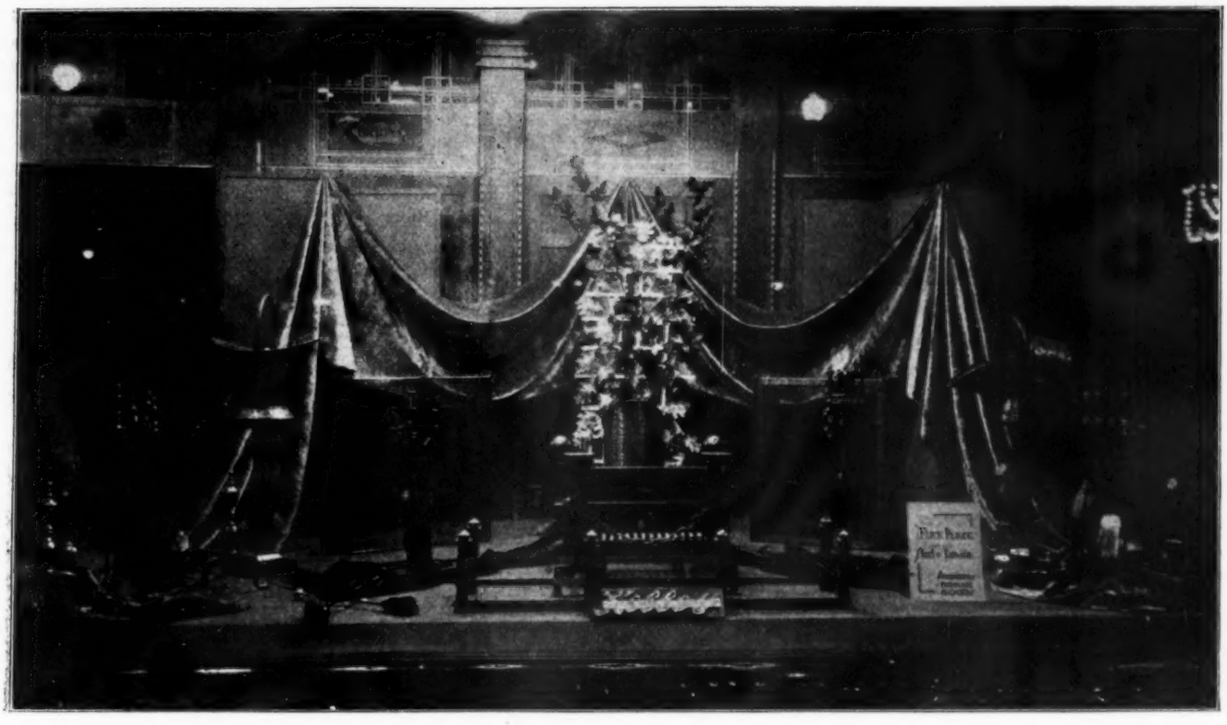
A fireplace is a thing of romance. Great poets and lovers and statesmen of the past enriched their imagination with the dream-shapes of the leaping flames or red embers of the fireplace on wintry nights.

Street, Duluth, Minnesota, and was awarded Special Honorable Mention in AMERICAN ARTISAN AND HARDWARE RECORD Window Display Competition.

Mr. Klasky evidently senses the essential artistry of the fireplace and its pleasant traditions.

He used a screen at each end of the window display and draped green plush from the center to each screen. The fireplace and its accessories were agreeably accentuated by this striking background.

Because of the genuineness of its appeal and the sincerity and artistry of its decorative arrangement, this



Window Exhibit of Andirons and Fireplace Goods Arranged by M. E. Klasky for Kelly Duluth Company, 118 West Superior Street, Duluth, Minnesota, Awarded Special Honorable Mention in AMERICAN ARTISAN AND HARDWARE RECORD Window Display Competition.

One of the most popular books which has survived for more than half a century against competition of every form of novel and adventure is "The Reveries of a Bachelor," by Donald G. Mitchell, who wrote under the name of Ike Marvel.

The rare beauty of its pages derive their enticement from the fireplace. Probably more than any other book it has been responsible for keeping alive sentiment and reminiscences of the fireplace.

And that is why an exhibit of andirons and fireplace goods, such as that shown in the accompanying illustration, touches a responsive cord in the hearts of the people of today.

This exhibit was designed and arranged by M. E. Klasky for Kelly Duluth Company, 118 West Superior window display of andirons and fireplace goods resulted in a notable increase of sales.

McKinney Company Establishes Warehouse Stock in Chiacgo.

The McKinney Manufacturing Company, Pittsburgh, Pennsylvania, makers of butts and hinges, have established a warehouse stock in Chicago, to care for their rapidly growing business in the Central West. Their Chicago offices are now located in the beautiful new Wrigley Building at Rush Street and Michigan Boulevard, where Frank Koch, Manager for the Central West territory supervises the work of his staff of traveling salesmen, of which "Bill" Carroll is a new member.

How Hardware Dealers Make Use of Selling Helps Furnished by Paint and Varnish Manufacturers.

Two Excellent Examples of Dealer Helps that Were Employed to Good Advantage by Hardware Merchants.

One of the prominent paint manufacturers has recently issued a bulletin concerning the use of stains and varnishes for the purpose of producing hardwood effects on soft pine floors, from which the following paragraphs are quoted.

"Not every property owner can afford expensive hardwood floors and interior woodwork.

"But a little well-directed educational advertising would sell a lot of oil stain to those choosing white

Letter Insert Extolling Merits of Well Known Varnish That Is Suitable for Many Purposes. Used by Adolph Koretz, 3317 North Marshfield Avenue, Chicago Illinois.

pine, poplar, or whitewood interior trim and edge grain pine floors, but liking the hardwood effects.

"The soft woods, treated with oil stain finished over with a couple of coats of varnish,.or varnish and wax, can be made to closely imitate light or dark oak, cherry, mahogany, walnut, or mission oak.

"Home builders and home owners do not know these things. In order to sell their wares, dealers must let the people know what they have and what they are for. 'John Jones, The Old Reliable Paint Man—Sells the Best Paint', may be good enough advertising according to one way of looking at it, but there is nothing promotive about that style and it will sell no paint.

Many manufacturers are furnishing to retailers of varnishes and paint, ready-to-use advertisements, such as letter inserts, folders, booklets, and where these are judiciously used, they always help to create new customers and increased sales to old customers.

But they must be sent out, and not allowed to gather dust, either on top of or below the counters, as is the case in too many stores.

We show herewith reproductions of such a folder, as well as of a retail advertisement, the cuts for which was furnished by manufacturers.

The first illustration shows a letter insert which is a part of the selling helps furnished by J. B. Cornish & Company, Chicago, manufacturers of Ar-ki-teck Spar, a well known varnish of unusual merit.

It will be noted that this varnish is claimed to be quickly drying and that it resists the action of boiling water and other destructive elements that mar the ordinary kind of varnishes—all of which should appeal to the householders.

In the second illustration we show a reproduction of

Newspaper Advertisement of Billings Hardware Company, Billings, Montana, for Which Cut Was Furnished by the Manufacturers.

a ten-inch advertisement, three newspaper columns wide, inserted in the Billings, Montana, *Gazette,* by the Billings Hardware Company, the cut for which was furnished by the manufacturers of Gilt Edge House Paints.

Both of these are good examples of well prepared and well utilized selling helps, and other hardware dealers may well follow in the footsteps of the two progressive merchants mentioned.

Paraguay Offers Market for American Hardware.

An interesting and suggestive report from Vice Consul George E. Seltzer, Asuncion, Paraguay, is published in *Commerce Reports* concerning the opportunities for the sale of American hardware in that country. He writes as follows:

Since Paraguay is an agricultural and pastoral country, the market for hardware is principally limited to these industries. Hardware, which in the customs classification of Paraguay includes a wide range of articles, such as agricultural implements and machinery, automobiles, cement, cutlery, marble, tin plate, lumber, pumps, plumbing, and other supplies, is only exceeded in the list of imports into Paraguay by textiles and groceries, the three lines together representing about 75 per cent of the total imports.

Preference for American Goods Result of War.

Before the war the hardware market here was controlled by Germany; England occupied second place, and the United States third place. The greater part of the "hardware," as the term is understood in the United States, was imported from Germany. The imports from England consisted largely of railway and tramway equipment, from Belgium cement, and from the United States agricultural implements.

During the war, with the competition of the European countries almost entirely eliminated, the American manufacturers had no trouble in finding a ready market for their hardware and cutlery, and as a result the preference today for American products, both on the part of the ultimate consumer as well as that of the retail importer, is very marked. The Paraguayan consuming public is already familiar with American-made typewriters, sewing machines, motor vehicles, tractors, cameras, flashlights, etc.

Kinds of Hardware in Demand.

The common kinds of hardware are extensively used and the hardware of the modern type and high quality is now finding its way into this market. The principal kinds in use in this country are: Lumbering tools; some agricultural tools and implements; carpenters' tools, such as saws, hammers, hatchets, chisels, planes, braces, etc.; knives of all kinds; builders' hardware, chiefly locks, padlocks, hinges, wrenches, axes, files; house-furnishing fixtures, cabinet hardware; lamps and lanterns. In agriculture, the crudest of methods and of instruments are still in use. To most farmers the modern plow is unknown, the sharpened stick being used to turn over the soil. Axes are used for clearing the ground and machetes for cutting the weeds and underbrush.

In this market there is a demand for two classes of goods: Hardware and cutlery of excellent quality at high prices; and that of a poor quality to be sold at low prices. Because of the limited purchasing power of the population, the cheaper articles are in greater demand. Therefore the dealers here naturally take more interest in keeping a large stock and a complete line of cheap goods on hand.

Necessity of Extending Credit Facilities.

Two of the three most important hardware import concerns here are branches of houses in Selingen, Germany. During the war they turned to the United States for their supplies and were well pleased with the quality and the finish of the merchandise. These German houses and the other important dealers, however, find that they can not continue to buy in the United States because American exporters are unwilling to provide them with the articles they want and in the qualities and styles that they request.

Therefore in order to avoid the loss of this market to the German and English exporters who formerly monopolized it and are again entrenching themselves strongly because of the credit facilities offered, American exporters must give due consideration to the question of meeting the demands of their customers for style and quality and merchandise, and also to the question of terms. Credit facilities must be extended, as in most cases in this country they are more important in obtaining trade than the actual prices quoted.

The lowest bank discount rate is 12 per cent per annum, and the interest on money is usually much higher. Goods coming to Paraguay are usually held at Buenos Aires or at Montevideo, whence they are transshipped from one to four months before they are forwarded to Asuncion. It is quite obvious, then, that to demand payment with order (which seems to be the prevailing custom among American exporters seeking the local market) entails considerable sacrifice for the Paraguayan merchants.

Nebraska Hardware Headquarters Are Now in Fine Offices.

The Nebraska Retail Hardware Association and its auxiliary, the Nebraska Hardware Mutual Insurance Company, have moved their office to 414-417 Little Building, corner 11th and O Streets, Lincoln, into newly and thoroughly equipped office rooms, where the Secretary and other officials of the two organizations will be pleased to greet their patrons and friends.

Carbola Chemical Company Moves to New Location.

The offices of the Carbola Chemical Company, maker of disinfecting white paint, have been moved from 7 East 42nd Street, New York City, to the Company's new home, 299 to 309 Ely Avenue, Long Island City, New York.

Patent Office Registration for Pocket Knives Is Granted.

Remington Arms Company, Incorporated, Bridgeport, Connecticut; Ilion, New York; Swanton, Vermont, and New York City, has obtained United States Patent Office registration, under number 135,662, for the trade-mark shown herewith. The particular description of goods to which it applies is pocket knives. The Company claims use since June 30, 1920, and application for registration was filed July 31, 1920.

135,662.

Is Granted Registration for Fabric Glove Trade-Mark.

United States Patent Office registration has been granted to The Boss Manufacturing Company, Kewanee, Illinois, under number 134,626, for the trade-mark reproduced herewith. The particular description of goods to which it applies is fabric gloves and mittens. No claim is made apart from the mark shown to the words "Xtra Hevy." The Company claims use since December 3, 1919.

The Boss Manufacturing Company, Kewanee, Illinois, has also been granted United States Patent Office registration for the trade-mark shown herewith, under number 134,627. No claim is made apart from the mark shown to the word "Hevy." The particular description of goods to which this trade-mark applies is fabric gloves and mittens. The Company claims use since December 3, 1919, and application for registration was filed July 7, 1920.

Trade Opportunities in Foreign Lands.

The Bureau of Foreign and Domestic Commerce through its Special Agents, Consular Officers and Commercial Attachés, is receiving information of opportunities to sell hardware and kindred lines in several foreign countries. Names and locations will be supplied on request to the Bureau in Washington or its District Offices. Such requests should be made on separate sheets for each opportunity, stating the number as given herewith:

34580.—A mercantile company in Rumania desires to purchase and secure agencies for the sale of hardware and construction material. Quotations should be given c. i. f. Rumanian port. References.

34585.—An American citizen who has spent a great many years in Agentina engaged in the import trade is now in the United States and desires to secure an agency for the sale in Argentina and Uruguay of hardware, cordage, iron and steel products, automobile accessories, etc. References.

34592.—An American commercial agent, who has sales and office connections in France, is in the United States and desires to be placed in communication with firms with a view to securing an agency for the sale of mechanics' tools, nails, tacks, bolts, screws, locks, padlocks, door checks, door plates, saws of various types, gas heaters and ranges, paints and brushes, sporting goods, etc. Quotations should be given c. i. f. Havre, France, or f. a. s. New York. References.

34600.—An American firm doing an export business from the Pacific coast is about to open a branch office in Mexico and wishes to secure the representation of dealers in hardware. No reference offered.

34602.—A commercial agency firm in Belgium desires to secure an agency for the sale of bicycle chains and to purchase bicycle accessories. Terms: Cash.

34603.—An inquiry has been received from a man in Mexico for the purchase of corrugated iron for the roof and sides of a building. Catalogues and price quotations are desired on various dimensions of sheets f. o. b. port of shipment. Terms: Cash. Reference.

34607.—A firm in Mexico desires to purchase white lead, paints, varnishes, and wall paper, and requests to be placed in communication with manufacturers in order to purchase direct, and have exclusive agency for his district in Mexico. Quotations should be given f. o. b. El Paso, Texas. References.

34609.—An export manager in the United States having had experience in the sale of goods in Mexico is about to return to that country and wishes to secure agencies from manufacturers or wholesale dealers in hardware. No reference offered.

34617.—A commission merchant in Cuba wishes to represent manufacturers and exporters for the sale on commission of large quantities of iron, steel, general hardware, house furnishing goods, cutlery, stamped and enameled ware, tinware, cans, etc. No references offered.

Coming Conventions.

Sheet Metal Contractors' Association of Illinois, Quincy, Illinois, April 6 and 7, 1921. Frank I. Eynatten, Secretary, 1317 South Washington street, Peoria, Illinois.

Western Warm Air Furnace and Supply Association, Sioux City, Iowa, May, 1921. John M. Hussie, Secretary, Omaha, Nebraska.

Panhandle Hardware and Implement Association, Amarillo, Texas, May 8, 9 and 10, 1921. C. L. Thompson, Secretary-Treasurer, Canyon, Texas.

Stove Founders' National Defense Association, Hotel Astor, New York City, May 10, 1921. R. W. Sloan, Secretary, 826 Conwell Building, Scranton, Pennsylvania.

National Association of Stove Manufacturers, Hotel Astor, New York City, May 11 and 12, 1921. Robert S. Wood, Secretary, National State Bank Building, Troy, New York.

Hardware Association of the Carolinas, Charlotte, North Carolina, May 10, 11, 12 and 13, 1921. T. W. Dixon, Secretary-Treasurer, Charlotte, North Carolina.

Iowa Sheet Metal Contractors' Association, Savery Hotel, Des Moines, Iowa, May 11 and 12, 1921. R. E. Pauley, Secretary, Mason City, Iowa.

American Hardware Manufacturers' Association, Marlborough-Blenheim Hotel, Atlantic City, New Jersey, May 11, 12, 13, 1921. F. D. Mitchell, Secretary-Treasurer, 4106 Woolworth Building, New York City.

Old Guard Southern Hardware Salesmen's Association, Marlborough-Blenheim Hotel, Atlantic City, New Jersey, May 12, 1921. R. P. Boyd, Secretary-Treasurer, Box 19, Rural Free Delivery Number 4, Knoxville, Tennessee.

Southern Hardware Jobbers' Association, Marlborough-Blenheim Hotel, Atlantic City, New Jersey, May 11, 12, 13, 1921. John Donnan, Secretary-Treasurer, Richmond, Virginia.

Southeastern Retail Hardware and Implement Association (composed of Alabama, Florida, Georgia and Tennessee), Atlanta, Georgia, May 17, 18, 19 and 20, 1921. Walter Harlan, Secretary, 701 Grand Theater Building, Atlanta, Georgia.

National Warm Air Heating and Ventilating Association, Cleveland, Ohio, May 23 and 24, 1921. Allen W. Williams, Secretary, Columbia Building, Columbus, Ohio.

Metal Branch of the National Hardware Association, Hotel Cleveland, Cleveland, Ohio, June 3 and 4, 1921. George A. Fernley, Secretary, Philadelphia, Pennsylvania.

Mississippi Retail Hardware and Implement Association, Great Southern Hotel, Gulfport, Mississippi, June 14, 15, and 16, 1921. E. R. Gross, Secretary, Agricultural College, Mississippi.

National Association of Sheet Metal Contractors, Fort Pitt Hotel, Pittsburgh, Pennsylvania, June 14, 15, 16, and 17, 1921. Edwin L. Seabrook, Secretary, 261 South Fourth Street Philadelphia, Pennsylvania.

Sheet Metal Contractors' Association of Ohio, Hotel Gibbons, Dayton, Ohio, July 19, 20, and 21, 1920. William J. Kaiser, Secretary, 123 East Chestnut Street, Columbus, Ohio.

Retail Hardware Doings.

California.

A new hardware store has opened for business in Escalon under the name of Escalon Implement and Hardware Company.

Illinois.

Greig-Westman Hardware, Plumbing and Heating Company has been succeeded by the Greig-Van Nattan Hardware, Plumbing and Heating Company at Springfield.

Minnesota.

John Olund of Minneapolis expects to open a hardware store in that city soon.

F. W. Heuer of Owatonna purchased the hardware business of Grimm Brothers, hardware dealers at Hayfield.

Missouri.

Joe Layman has traded his farm north of Hardin for the Hoover and Myers hardware store in that city.

James W. Milles will open up a new hardware store in his building on the north side of the square at La Plata.

New Mexico.

A. Sweitzer will put in a line of hardware in the building he recently purchased at Roswell.

Wisconsin.

S. Cohen has sold his hardware store at Hancock.

Advertising Help and Comment

Send Us Copies of Your Advertisements. Let Us Help You Get Bigger Results by Advice and Suggestions. The Service Is Free. Don't Hesitate to Take Advantage of It.

Although it contains no description and price of particular articles, the advertisement of the Farmers' and Consumers' Cooperative Com-

pany reproduced herewith from the *Sheridan Enterprise,* Sheridan, Wyoming, is a forceful piece of copy.

It calls attention to the mild weather as a time suitable for doing the stray jobs about the house which need attention. It suggests hardware in that connection.

When followed by specific copy presenting tools and other hardware supplies for such odd jobs around the house, this kind of advertising increases sales.

However, it is ineffectual if it is not reinforced by additional and particularized advertisements.

* * *

An exceptionally well-worded sales message is the advertisement of the Soo Hardware Company which is reproduced herewith from *The Times,* Sault Ste. Marie, Michigan.

Enameled ware is advocated not only for its cleanliness and the ease with which it can be washed, but also for its service in conserving the flavor of the food which is cooked in it.

The make-up of this advertisement—which was two columns wide by eight inches long in the original—is such as to induce a more than cursory glance from the reader.

The figure of the young housewife is uncommonly neat and attractive and helps accentuate the idea of "the clean ware."

Without crowding the space of the advertisement or cutting down its text, there is room for a state-

ment of prices, which would enhance the persuasiveness of the copy and make its sales message more conclusive and convincing.

* * *

Beyond question there is some advantage to be had from a small advertisement which is merely a business card set in display type.

Therefore, the advertisement of E. L. Ellsworth reproduced herewith from the *Daily News,* Dayton, Ohio, serves a useful purpose.

It tells the people of Dayton where to find Mr. Ellsworth, where to 'phone to him, and gives them a general idea of the kind of work and service he is prepared to render.

This advertisement does not pretend to solicit patronage directly nor to obtain specific orders.

It is more in the nature of a signpost guide for the public than a particular message.

* * *

Brisk, incisive wording is the laudable feature of the Atlanta Hardware Store's advertisement, reproduced herewith from the *Haldredge Citizen,* Atlanta, Nebraska.

But the swing of the sentences is perceptibly retarded by the use of all capital letters for every word.

We are accustomed to read words printed in the small or "lower case" letters of the alphabet and to seeing capital letters only for the be-

ginning of a sentence or for emphasizing names and the like.

Hence, it slows down our attention to have to read word after word printed in all capital letters.

This advertisement would be much stronger if it were set up in the customary way—the way in which we are used to seeing and reading sentences.

Excellent Installation of Warm Air Heating and Ventilating Apparatus in Modern Home.

A Well Planned and Highly Satisfactory Installation of Warm Air Heater, Executed by H. R. Olinger, Auburn, Indiana.

In the accompanying illustration the floor plan is shown of an installation of a warm air heating apparatus, which was done by H. R. Olinger, Auburn, Indiana, the local distributor of Front Rank Warm Air Heaters.

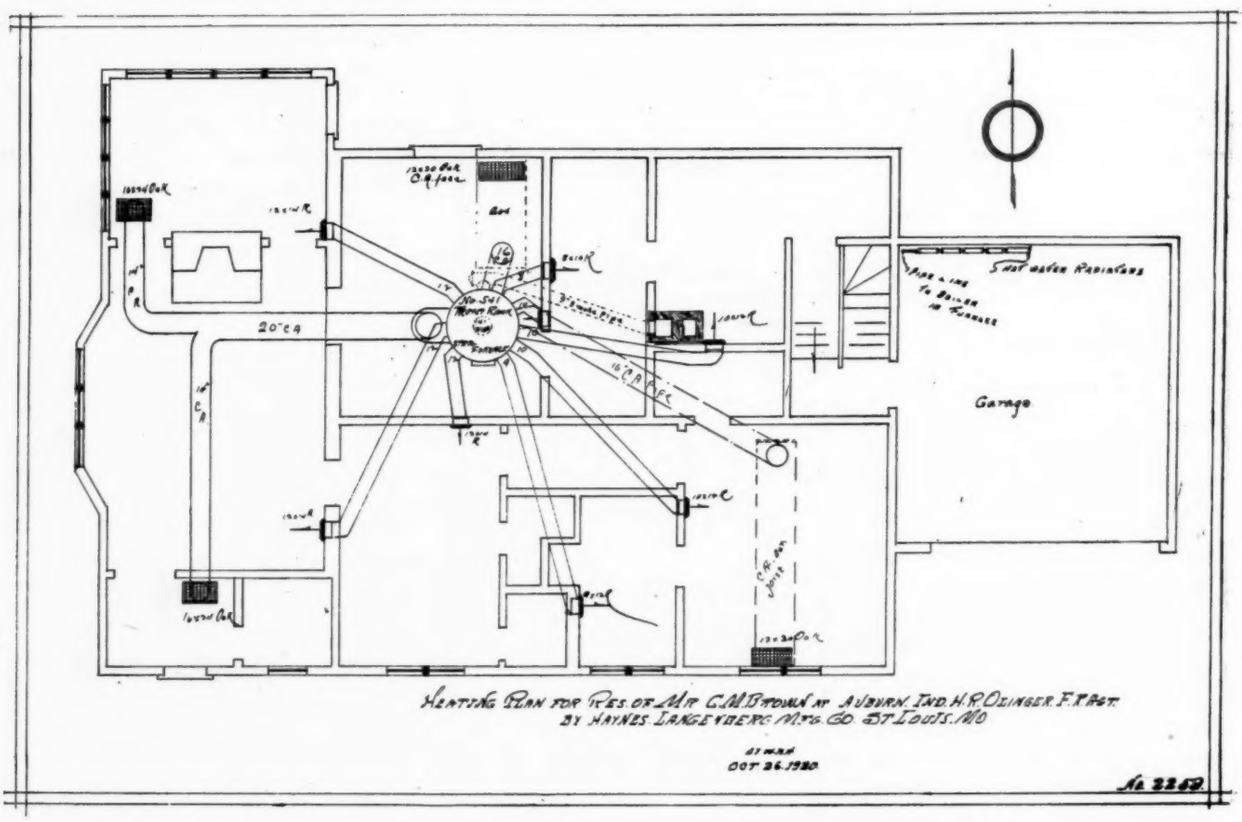
The plans were furnished by the engineering department of the Haynes-Langenberg Manufacturing Company, St. Louis, Missouri, from data furnished by Mr. Olinger.

As the ground plan itself roughly tells you, this is a thoroughly modern home. Mr. Brown wanted a first class heating system in every respect and permitted the installer to go the limit.

rule is sufficiently accurate for all practical purposes. It was used by the installer.

Assumed that the outside wall construction is normal for the district in which it is built, add two-thirds of the glass surface including outside doors, one-sixth of the net outside wall surface and one one-hundredth of the cubic contents of the room. This gives the cross area in square inches of the pipe to be used to secure seventy degrees in zero weather. For each degree below zero add one per cent. For each ten feet the pipe runs more than fifteen feet, add one inch diameter.

The total cold air supply should be not less than



Floor Plan of Warm Air Heater Installation Executed by H. R. Olinger, Auburn, Indiana, for C. M. Brown, Auburn.

He displayed good judgment in putting confidence in the skill, knowledge, and experience of Mr. Olinger, whose reputation warranted such trust.

The average low temperature in Auburn, Indiana, is ten degrees below zero, so the heating system shown in the plan was designed to meet this. There are almost as many formulas for determining the size of warm air pipe to be used in each room as there are men using them. The most accurate is that recommended by the National Warm Air Heating and Ventilating Association. It has the disadvantage, however, of being a little involved, and the following very simple

the total warm air supply. No room, no matter how small, should have a pipe smaller than eight inches in diameter.

In this case there are no abnormally long pipes, so the calculations were simplified, merely remembering that ten degrees below zero had to be met.

It will be noticed that the total area of the warm air pipes is 686 square inches, while the total of the cold air pipes is 716 square inches. This is a little more cold air than is necessary, but it allows us to use regular size pipes. The "Front Rank" warm air furnace with a capacity nearest to but a little larger than is

required is the Number 541, which will supply 700 square inches of pipe without forcing. Mr. Olinger therefore specified that size.

Attention is called to the fact that there are four separate cold air faces, combined in the basement into three pipes. This literally returns the air from the four corners of the building.

The garage in this case is built onto the side of the house as a part of the main building, so it was a simple matter to place a small hot water boiler in the furnace and heat the garage above freezing with a hot water radiator.

This heating system which is complete in all respects is equipped with a Minneapolis Eight Day Duplex Heat Regulator, an Automatic Air Moistener, and Ash Pit Sprinkler. Registers were specially finished to match the hardware, and the oak cold air faces stained the same color as the hardwood floors.

Altogether, it was a very satisfactory job and shows what can be accomplished with warm air heating systems where the owner will allow the installer and manufacturer to plan the system exactly as it should be.

Furnace Dealer Demonstrates That Business Is Good.

An unusual amount of interest in warm air furnaces was created in Youngstown, Ohio, during the week of March 14th to 19th, by the Perkins Hardware & Roofing Company, when that concern dressed its windows with the material furnished by the Mahoning Foundry Company for a special drive after warm air furnace business.

The display and other features of the special drive were extensively advertised in the Youngstown newspapers. Through the entire week the store was visited

Excellent Window Display Featuring Mahoning and Wright Warm Air Furnaces, Used in Special Drive by Perkins Hardware & Roofing Company, Youngstown, Ohio.

by large numbers of furnace prospects. Direct and definite results have already been traced to the display.

More than anything else, the drive made to sell the Mahoning and Wright warm air furnaces in Youngstown proves that there is still plenty of business to be had if it is gone after with determination.

It was found that the portion of the display that showed the economical features of these furnaces attracted the most attention and occasioned the largest number of inquiries. What will perhaps interest furnace dealers is the critical desire on the part of buyers to be sure they are getting heating equipment that can be operated with the greatest economy.

Pattern-Making Companies Form a Consolidation.

The George E. Shaw & Son Company and the Taft Metal Pattern & Manufacturing Company of Cleveland, Ohio, have just effected a consolidation and are now located in a new shop at 1362 East Third Street, Cleveland, in the center of the city, just north of the postoffice.

With their new shop and equipment, including designing and drawing department, they are able to take a manufacturer's ideas and data and work up full size drawing for wood and metal patterns complete.

From the beginning of the year 1920 up to March 1st of this year, they have built eleven different sizes of furnaces and are now working on several more.

The designing and drawing are in charge of A. E. Shaw, who has had thirty years of experience in this line of pattern work.

F. W. Taft manages the metal and casting end of the business with a skill which comes from long and varied practice.

Wise Furnace Company Issues New Catalog.

Catalog No. 16 of the "Wise" Quality Line of Warm Air Heaters, just issued by the Wise Furnace Company, Akron, Ohio, is in effect an illustrated text-book of the Company's products.

The dealer and installer who study the clear and detailed explanations of this catalog will not only improve their knowledge of warm air heaters but also derive selling arguments which are certain to be of big advantage to them in their business.

Ed C. Pfeffer Passes Onward.

Ed C. Pfeffer, manager of the Register Department of the Columbian Hardware Division of The Consolidated Iron-Steel Manufacturing Company, Cleveland, Ohio, died very suddenly, Thursday, March 24, 1921. He was in the offices of the company in apparently splendid health the Saturday before.

His loss is very keenly felt as one of the valuable associates of the company whose future was very bright.

Mr. Pfeffer was well and favorably known in the trade and his pleasant manners and staunch loyalty to his friends were characteristics which were appreciated by all who came in contact with him.

Plan Your Day's Work to Make it Run Smoothly.

The ability to work steadily rests upon two foundations—the planning of a day's duties so that they naturally follow one another and there are no vacant periods of waiting for the next bit of work to come along, and a power not so much of concentration, but of avoiding distractions.

Practical Helps for Tinsmiths

No Two Jobs Are Exactly Alike. Therefore, the Sheet Metal Worker Has to Meet Each Difficulty as It Comes. Send Your Problems to Us. Let Our Experts Help You.

LAY OUTS FOR FLARING ARTICLES

By O. W. Kothe, Principal St. Louis Technical Institute and Instructor in the David Rankin, Jr., School of Mechanical Trades, St. Louis, Missouri. Written especially for American Artisan and Hardware Record.

Some time ago, a subscriber wanted the principle in developing flaring articles, and so here we show a few problems. First consider the drawing at the left, where the solid lines as A-B-C-D represents a common milk pan.

Observe the sides have an equal flare, and the top and bottom produce parallel lines. Now by extending the side lines, and continuing them they will meet in the apex X.

Then this entire drawing as A-B-X-A forms a cone, and it does not matter what their rise or diameter is or flare—just so the apex X is directly under the center of the top base.

Now, if we draw a line as E-F in the elevation, then E-A-B-F will form the outlines of a pail, and as the flare is the same, these side lines will merge in point X.

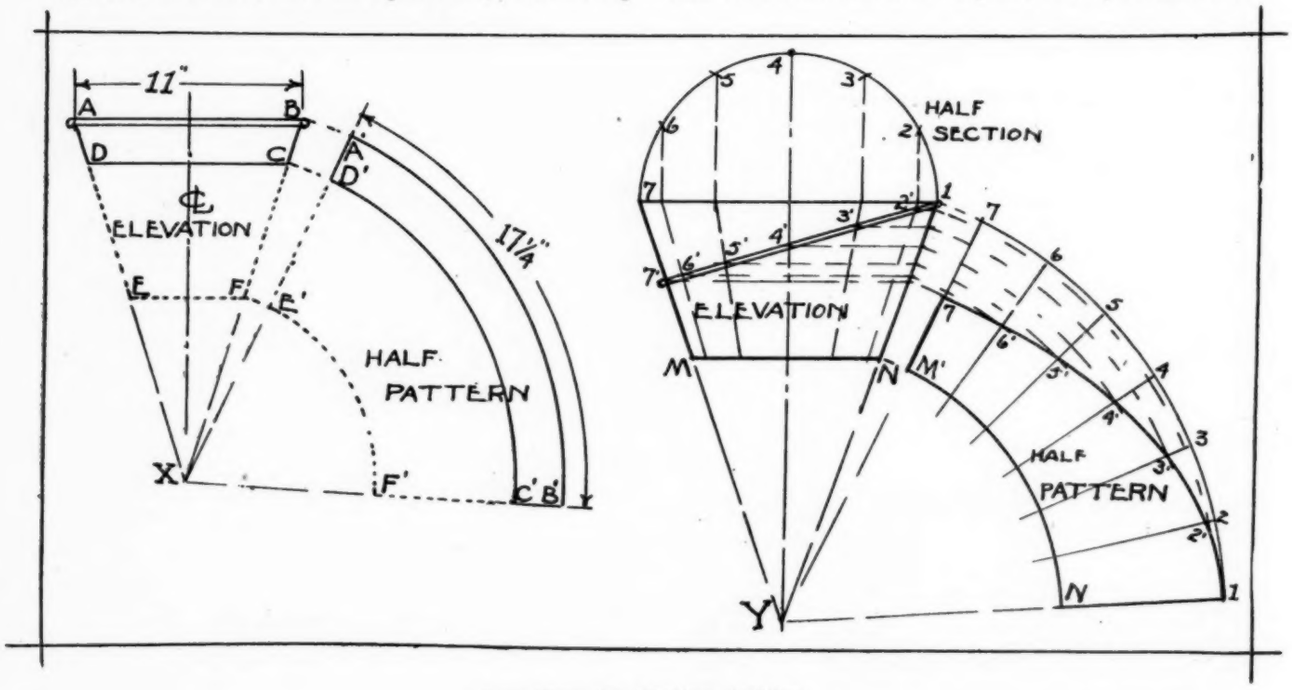
Observe the center line is first drawn, and the elevation is built around this center line, so the body of pan or pail may pivot around on this center line, if it were arranged that way.

To strike out the pattern, observe it must be unrolled, and so we set dividers to point X as center, and B as radius—strike as arc as A′-B′. Now as the pan measures 11 inches, we figure the circumference by multiplying with 3.14 and we have 34.54, or say 34½ inches.

As these pans or pails are generally made in two pieces, only a half pattern is made. So one half of 34.54, gives us 17¼ inches.

With a ziz zag rule measure this along the arc A′-B′, and mark it. Then from B′ we draw a line to X and then we sweep the other arcs using X as center and X-C and X-F as radius.

The line drawn from B′ to X adjusts the circumference lines for arcs D′-C′, also E′-F′, so that these arcs do not need to be measured again. And that is all there is to any flaring vessel, only laps must be allowed extra, because the development always takes in the net edges.



Lay Outs for Flaring Articles.

At the right of drawing we have a similar conical vessel, where the top is cut on a slant as 1-7′. But first observe that sides 1-N and 7-M have equal flares and that the top 1-7 and bottom M-N are parallel lines, and that the sides are extended to the apex Y.

On this top base 1-7 a half circle is described, and divided into equal spaces. From each of these points drop lines to the base 1-7. The reason for this, is that the fitting starts to taper from the 1-7, so that the lines in the half section must be square to 1-7, or parallel to the center line 4-Y.

Then these lines are drawn from each point in line 1-7 toward the apex Y, to at least line M-N, we then draw the top slant line as 1-7′. This is drawn at any angle or position desired. It can be curved as well as straight.

Now where the radial lines intersect this line, as in points 2′-3′-4′-5′-6′-7′, square over horizontal lines to the outer slant line Y-1. The reason for this is, that the elevation does not show a convexed surface on the drawing, and is flat.

All lines appear as on a flat surface, but when treated this way, the lines come if the drawing was convexed, although it is flat. And to bring the lines to their true length, they are projected over to the side line as in points between 1-N.

To set out the pattern, use Y as center, and Y-1 as radius, and strike an arc as 1-7. On this arc step off the spaces from half circle, and draw lines toward apex Y. Then with dividers sweep arcs from each point on line 1-N until they intersect lines of similar number as 2′-3′-4′, etc. Sketch a line through these points, and the pattern for half the vessel is set out. Laps for seams and wire must be allowed extra.

Muskegon Sheet Metal Folks Hold Profitable Meeting.

Several profitable and instructive talks on business readjustment were given by members of the Muskegon Local of the Michigan Sheet Metal Contractors' Association at the meeting of the Muskegon Association Tuesday evening, March 29th, in the permanent quarters of the local in the Union Trust Bank Building.

Eight firms from Muskegon were represented. Besides, D. A. Van Oort from Whitehall and August Hartel from Grand Haven were in attendance.

The Local had as visitors at the meeting State Secretary F. E. Ederle and A. G. Madson of the Chicago office of the Wheeling Corrugating Company.

Mr. Madson gave an interesting comparison of sheet metal conditions of Chicago with those of surrounding territories. Mr. Ederle's talk was confined mostly to outlining the plans for the year concerning educational features of the organization and methods for increasing business.

Recommends Closer Relations Between Locals and State Organization.

The annual report of the Ways and Means Committee of the Wisconsin Sheet Metal Contractors' Association, which was rendered by John Bogenberger, Chairman, at the recent Convention in Milwaukee, contains several constructive recommendations, some of which are quoted herewith:

"Our Committee would suggest that the various secretaries of all the Locals in the State of Wisconsin send the minutes of their meetings to the State Secretary, who in turn will read them at the monthly meeting of the Board of Directors, in that way advising the State Board of Directors of what is going on in the various Locals. This we believe would be important, inasmuch as we expect in the next few months there will be considerable labor trouble, and we believe it would be well if we are all acquainted with what is doing in other parts of our State.

"We would also recommend that any of the Local Associations in the State of Wisconsin having any particular agreement with labor unions in their home town, send a copy of the same to the State Secretary, who in turn will see that they are provided with a copy of any other Local Association of a similar agreement, if they so desire.

"We also recommend that all Local Associations having any grievances with any jobbers or manufacturers also advise the State Secretary thereof, and if the same has been settled, as to its outcome.

"These recommendations are for the purpose of keeping the State Board of Directors in closer touch with the membership of the state. Individual members are also treated as Local Associations in these recommendations."

Work on Sheet Metal Data Book Is Progressing at Good Rate.

In a letter from Paul F. Brandstedt, Washington, D. C., Chairman of the Trade Development Committee of the National Association of Sheet Metal Contractors, the information is given that the Architectural Cornice Section, which is under the immediate charge of Mr. Brandstedt, has progressed so far with its work that a number of standard drawings and specifications have been completed, except for minor alterations.

The Chairman suggests that other sub-committees proceed along similar lines and that special efforts be made to expedite the work, in order that the Committee may be able to present to the National Convention, when it meets in June, a large portion of the Data Book.

All work that can possibly be completed by June first will be ready, so that it may be shown at the special meeting of the Trade Development Committee, which is to be held at the Fort Pitt Hotel, Pittsburgh, on Monday, June 13th, the day preceding the Annual Convention.

Buys an Interest in Sheet Metal Business.

C. H. Graham, formerly of 1064 Barrett Avenue, St. Paul, Minnesota, has bought an interest in the sheet metal business of the Hamilton & Hamilton Hardware Company, Oskaloosa, Iowa.

The sheet metal department of the company will be operated as a separate business in new quarters and will be conducted under the name of the Hamilton-Graham Company.

A roofing department has been added and the facilities of the business have been considerably enlarged.

Mr. Graham has been a constant reader and ardent advocate of AMERICAN ARTISAN AND HARDWARE RECORD for many years.

Compliments AMERICAN ARTISAN on Its Improvements.

TO AMERICAN ARTISAN AND HARDWARE RECORD:

I want to compliment you on the many improvements in your paper. During the past year it has improved 100 per cent.

Yours respectfully,
W. E. BRIGGS,
Tin Work and Furnaces.

Auburn, Illinois, March 24, 1921.

Greenberg Shows Why Bob Was Able to Underbid John In the Sum of Twenty-five Dollars on Ventilator Job.

John Was Peeved and Hated Bob for Underbidding Him. But He Forgot His Anger When He Learned Why Bob Won.

Written Especially for AMERICAN ARTISAN AND HARDWARE RECORD by J. C. Greenberg, Peoria, Illinois.

When I entered John's shop, he was furious.

He was as surly as a man could possibly be.

Being a salesman, and knowing how small the chances are to sell a man a bill of goods in such a frame of mind, it was my duty to smooth his grouch over, and restore his mind to normal.

So I proceeded to edge in easy like, and began to fish for the cause of his trouble.

He was talkative all right—he was too talkative.

The line of talk that he put up was a corker. No. I can't tell you the exact language he used, because there are postal laws in existence which regulate the language in a magazine.

Nuff sed. At any rate, here is the reason for his grouch:

Jim and Bob were two old friends who were in the sheet metal line.

Bob had served his apprenticeship in Jim's shop, and finally set up in business for himself.

It seems that the week before this story opens, there was a sweet ventilator job to be given, and Bob underbid John just exactly twenty-five dollars, and of course landed it.

The job involved six hundred dollars, and John having lost out, was as sore as he could be.

He said that he hated Bob with his whole heart, and that he would get back at Bob if it took all the money he had.

Manifestly, anything which reduces the amount of labor required for a job is an advantage to the sheet metal contractor.

There is no sense and comparatively little profit in doing by hand what could be done as well by machine.

In the competition for contracts, the sheet metal shop which has adequate mechanical facilities generally wins over the shop which is lacking in these necessities.

In many instances the time element is a highly important factor in contracts.

We live under high tension and we want things done quickly.

I asked him whether Bob had the right to bid twenty-five dollars lower providing he based his figures on a fair profit, but John said in an emphatic manner that the job could not be done for less than six hundred dollars, and at five seventy five, there was a loss of twenty-five dollars and, therefore, the cut was a "dirty trick" on the part of Bob.

Well, we sat down and figured for a long time, and after we figured the metal, time, overhead, and everything, I was convinced that John was right.

I was sure, however, that Bob was a great hand on figures and profit, and would take oath that he would not wilfully underbid his competitor.

So I went to his shop, found him in, and began to talk about this job along the lines of price and profit.

I showed Bob where he was wrong, and told him that I was sorry to learn that he was stooping to low down tricks.

I impressed him that if a man did not figure on profit, he could not pay his bills, and when he could not pay his bills he could not buy goods, and eventually go out of business.

I knew Bob when he was a boy. I had sold his father before him, and felt that as a friend of the "family" I had the full right to correct him along the line of his business.

Bob took it all in, did not say a word, but I could see that he had something up his sleeve which would come out as soon as I was finished with my lecture.

However, all he said was:

"Mr. Greenberg, I bid this job right. I have figured every item, and I will make as much money on it as I am justly entitled to.

"To prove this," he continued, "I will show you how I figured this, and will convince you that I am right in my figures. The trouble is really with John, not with me. I would not care a rap what you or John think about my bid, but when you say that in your opinion my credit is going to pieces you have mentioned a thing I must not damage. This is why I want to prove myself right."

We started to figure the job, item by item, till we reached the labor end.

There is where John seemed to make a grave mistake.

It seemed to me that he had not allowed enough hours of labor.

I explained to him that there was a tremendous lot of skylight bars that was slow and tedious work, and that the number of hours of labor would not possibly cover all the work in the entire job.

I showed him that he would have to pay for many hours of labor which his figures did not show, and at the end of the job he would run out less profit than he had expected.

I told him frankly that he was wrong, and that our

friend John was justified in having that unfriendly feeling he did have for him.

But Bob was as cool as a cucumber. He only smiled and said:

"I'll tell you what I will do. You come in this afternoon with John, and we will talk this over. Let him bring his figures with him, and we will go over it carefully by comparison.

"If I am wrong, I will do anything you two men suggest. If I am right, you both owe me an apology. I want to teach John a good lesson in modern methods of doing business."

"John is a fine man," he continued. "I have learned my trade under his guidance, and he has made me a first class mechanic. I am grateful to him of course, but John is getting so he thinks he knows everything about sheet metal work."

With this last remark, Bob picks up a sheet of yellow paper, puts it in his pocket, and tells me that he must attend to a "little important" matter at the freight depot.

After he had cranked his Ford and hopped in, he gave her the gas.

I went to the hotel, called John over the phone, and told him the arrangement we had made for the afternoon. John was a good sport, and consented to meet Bob.

I knew that Bob was wrong as far as I could see then. So I began to lay out a line of argument which would make these two men good friends again.

There is no more destructiveness in business of any kind, than hard feelings among competitors.

So I had a beautiful argument laid out, and I had already pictured out in my mind how they would both shake hands and be friends.

I had pictured that Bob would admit his guilt, and how John, being the older of the two, would forgive and forget—gee, it was good to think about, and I had it so fixed up that there would be no excuse for hard feelings between them.

What else could I do? As I saw it, Bob was absolutely wrong, and should admit it. John was a fine man, and would easily forgive, so I was certain of success in my peace making scheme.

Talk about a fellow being fooled—Oh, boy! I was fooled so badly that I never even used the speech I had prepared.

John and I were so surprised that we could not talk at all.

But wait till I tell you about it, and you will see it for yourself.

You will see that the "world do move" and we must move with it, or get left behind.

At one thirty, John met me at the hotel, and we both ambled over to Bob's shop.

Bob was there working with a hammer and a chisel on a large wood box trying to get the cover off.

As we stepped in, and I said "hello" Bob dropped his hammer and chisel, and we all sat down.

John did not say a word, not even "hello." He was still sore, you see. I passed out the cigars, we lit up, and I said, "Well, gentlemen, let's go."

John gave me his itemized bid, and Bob gave me his also, and we began to tally each bid.

For fifteen minutes everything tallied, but when we came to the labor end of it, there was a seeming discrepancy.

Bob did not allow enough labor hours. He could not possibly do the job in the number of hours he had figured.

Then John felt jubilant.

"There you are, I told you that Bob was wrong in his figuring. How in hell is he going to do this job in such few hours? If he had allowed the correct number of hours for the job, I really believe we would have been exactly alike in our figures."

It was up to me now to spring my peace salve which I had prepared for this occasion, wasn't it?

Well, I started out to say it, but Bob butts in something like this: "Mr. Greenberg," he says, "do you remember this noon when I drove away in my Ford, I picked up a yellow sheet of paper from the desk? Well, that piece of yellow paper was a bill of lading for this box."

And he pointed to it.

"When I bid on the job," he explained, "I knew that there was a lot of skylight bars to be made. I knew that these bars take up a lot of time in the making. So what did I do? I simply took up the AMERICAN ARTISAN AND HARDWARE RECORD, found out who makes slitting shears, and ordered one.

"If I had figured as John did, to cut them by hand with a pair of snips one at a time I would not have been able to handle it. Now as it is, I can run my sheets through and cut three at a time by simply turning the handle. This is three times as fast, and does better work."

Then turning to John, he added:

"You, John, are a little behind in your business ideas. How fast do you suppose you can cut the strips out of which you make the skylight bars by hand one at a time? I can cut three of them before you can jimmy your snips half way through one sheet. I can now do the job in the number of hours I have specified, make as much profit, and save time.

"What have you got to say for yourself? What are you kicking about? If you want to be a back number, do so, but don't blame me for it. I knew what I was doing all the time. Now, John, are we friends?"

Listen: John and I felt like thirty cents. What in Sam Hill could we say? There was my pretty speech all shot to hell, and John was embarrassed.

Now I was up against it for butting in. But John was a good sport. What do you suppose he did? He simply said:

"Bob, you are a younger man than I am. You are full of pep, and beat me to it with up-to-date methods. Let's open that box, and I will help you set the darn slitting shears up. I am satisfied that I am not as smart as I thought I was, and any time you want to be my partner in business, say so, and we will hook up together. I begin to see that old blood and old ideas go together."

They both shook hands, and I left soon after with two good orders in my book.

It just goes to show that good tools really govern the bid.

It proves that if you have not the tools to meet your demand, you can not succeed in business.

Get on the right side of your equipment, and get in position to bid right.

When you have a job to bid on, the first thing you should think of is, "Am I prepared to tackle this job?"

If you are prepared, you have a good chance.

If you are not prepared, you will lose money if you do get the job.

What do you say?

Michigan Sheet Metal Contractors Issue Poster of "Boosters."

The Michigan Sheet Metal Contractors' Association has issued a poster, fourteen inches wide by twenty-five inches long, bearing the significant title "Boosters For The Michigan Sheet Metal Contractors' Association," in which are listed various companies that coöperate with the organization in promoting the best interest of the trade.

At the bottom of the poster are given the names of salesmen, who make up the membership of the Travelers' Auxiliary.

The "Boosters" are classified according to commodities, such as warm air furnaces, steel ceilings, machinery and tools, trade journals, and so forth. They are as follows:

American Wood Register Company, Plymouth, Indiana;
Adams Company, Dubuque, Iowa;
American Blower Company, Detroit, Michigan;
A. B. Stove Company, Battle Creek, Michigan;
Art Stove Company, Detroit, Michigan;
American Rolling Mill Company, Middletown, Ohio;
Auld and Conger Slate Company, Cleveland, Ohio;
American Artisan and Hardware Record, Chicago, Illinois;
Allen Ventilator Company, Detroit, Michigan;
Barber Asphalt Paving Company, St. Louis, Missouri;
Barrett Company, The, Detroit, Michigan;
Beckwith Company, The, Dowagiac, Michigan;
Ball, H. L., Albion, Michigan;
Berger Manufacturing Company, Canton, Ohio;
Bingham Company, W., Cleveland, Ohio;
Buhl Sons Company, Detroit, Michigan;
Burton Company, W. J., Detroit, Michigan;
Brier Hill Steel Company, Chicago, Illinois;
Basman Company, A. M., Detroit, Michigan;
Clarage Fan Company, Kalamazoo, Michigan;
Carr Supply Company, Chicago, Illinois;
Co-Operative Foundry Company, Rochester, New York;
Cox Stove Company, Abram, Chicago, Illinois;
Castle Company, A. M., Chicago, Illinois;
Conkling, S. P., Detroit, Michigan.
Dieckmann Company, Ferdinand, Cincinnati, Ohio;
Detroit Stove Works, Detroit, Michigan;
Detroit Safety Furnace Pipe Company, Detroit, Michigan;
Dreis and Krump Manufacturing Company, Chicago, Illinois;
Excelsior Steel Furnace Company, Chicago, Illinois;
Edwards and Chamberlin Company, Kalamazoo, Michigan;
Fox Furnace Company, Elyria, Ohio;
Follansbee Brothers Company, Detroit, Michigan;
Friedley-Voshardt Company, Chicago, Illinois;
Globe Stove and Range Company, Kokomo, Indiana;
Hall-Neal Furnace Company, Indianapolis, Indiana;
Hart and Cooley Company, Chicago, Illinois;
Haynes-Langenberg Manufacturing Company, St. Louis, Missouri.
Henry Furnace and Foundry Company, Cleveland, Ohio;
Homer Furnace Company, Coldwater, Michigan;
Hopson Company, W. C., Grand Rapids, Michigan;
Ideal Furnace Company, Detroit, Michigan;
Independent Stove Company, Owosso, Michigan;
Jennison Hardware Company, Bay City, Michigan;
Lupton Sons Company, David, Philadelphia, Pennsylvania;
Lennox Furnace Company, Marshalltown, Iowa;
Lamneck Company, W. E., Columbus, Ohio;
Ludowici-Celadon Company, Chicago, Illinois;
Marsh Lumber Company, Dover, Ohio;
Milwaukee Corrugating Company, Milwaukee, Wisconsin;
Marshall Furnace Company, Marshall, Michigan;
Meyer Furnace Company, Peoria, Illinois;
Michigan Stove Company, Detroit, Michigan;
Monroe Foundry and Furnace Company, Monroe, Michigan;
Moore Brothers Company, Joliet, Illinois;
Morley Brothers, Saginaw, Michigan;
Mueller Furnace Company, L. J., Milwaukee, Wisconsin;
Marshalltown Manufacturing Company, Marshalltown, Iowa;
Meyer and Brother Company, F., Peoria, Illinois;
Michigan Safety Furnace Pipe Company, Detroit, Michigan;
Merchant and Evans Company, Chicago, Illinois;
Northwestern Stove Repair Company, Chicago, Illinois;
National Paint and Varnish Company, Cleveland, Ohio;
National Lead Company, Chicago, Illinois;
Osborn Company, J. M. and L. A., Cleveland, Ohio;
Premier Warm Air Heater Company, Dowagiac, Michigan;
Peck, Stow and Wilcox Company, Southington, Connecticut;
Perfection Furnace Pipe Company, Toledo, Ohio;
Pfeifer, William, New York City;
Quickwork Company, St. Mary's, Ohio;
Richardson and Boynton Company, Chicago, Illinois;
Rudy Furnace Company, Dowagiac, Michigan;
Republic Metalware Company, Buffalo, New York;
Roehm and Davison, Detroit, Michigan;
Raymond Lead Company, Chicago, Illinois;
Schwab and Sons Company, R. J., Milwaukee, Wisconsin;
Simons-Leedle Furnace Company, Marshall, Michigan;
Strellinger Company, C. A., Detroit, Michigan;
Scientific Refining Company, Cleveland, Ohio;
Steelcote Manufacturing Company, St. Louis, Missouri;
Sterner Company, Edwin, Flint, Michigan;
Superior Furnace Pipe Company, Detroit, Michigan;
Stearns Register Company, Detroit, Michigan;
Schoedinger, F. O., Columbus, Ohio;
Standart Brothers, Detroit, Michigan;
Scully Steel and Iron Company, Chicago, Illinois;
S. and O. Sheet Metal Works, Detroit, Michigan;
Swarthwout Company, J. D., Saginaw, Michigan;
Sheet Metal Worker, New York City;
Taplin Furnace Company, Grand Rapids, Michigan;
Thatcher Furnace Company, Chicago, Illinois;
Tiffin Art Metal Company, Tiffin, Ohio;
Tuttle and Bailey Manufacturing Company, Chicago, Illinois;
Utica Heater Company, Utica, New York;
U. S. Register Company, Battle Creek, Michigan;
Wise Furnace Company, Akron, Ohio;
Whitney Metal Tool Company, Rockford, Illinois;
Wolff Company, Benjamin, Chicago, Illinois;
Wheeling Corrugating Company, Detroit, Michigan;

The object of the poster upon which the foregoing names appear is to give thorough publicity to the firms who advertise in the program book of the Michigan Sheet Metal Contractors' Association, or whose salesmen are members of the Travelers' Auxiliary. Its further purpose is to familiarize the members of the Association with the names of salesmen who belong to the Travelers' Auxiliary so that they will solicit the membership of travelers not now belonging to the Auxiliary.

L. H. Pearce, Secretary of the Travelers' Auxiliary, is furnishing members of the Michigan Sheet Metal Contractors' Association with application blanks for the Auxiliary. It is hoped by this method to increase the membership of the Auxiliary to at least a one hundred and fifty before the next convention.

Chapman-Price Steel Company Starts Its New Plant at Indianapolis.

With construction work on the new 6-mill sheet plant of the Chapman-Price Steel Company, Indianapolis, practically completed, the company resumed operations a few days ago, according to the announcement by L. H. Price, General Sales Manager. About 200 men are employed and the mill is operating at about one-half of capacity.

The Company's plant was burned about one year ago. It then sold its old site on Madison Avenue and purchased a larger tract at Troy Avenue and Shelby Street. The new mill has a much larger capacity than the old.

Uses of Zinc Are Increasing.

Writing in the Engineering and Mining Journal, Stephen S. Tuthill, Secretary American Zinc Institute, indicates a gratifying increase in the use of zinc, as follows:

About 50 per cent of the slab zinc produced prior to 1914 was used in zincing or galvanizing plates and wire, but the requirements of zinc for war purposes seriously affected its application for that purpose.

At that time about 40 per cent of the slab zinc produced was used with copper, for making brass, practically one-third of the composition of which is zinc, and because of demand for brass for ammunition and gun parts the greatest outlet for zinc during the world war was naturally in this direction.

The remaining 10 per cent of the pre-war output was rolled into plates and sheets. Two of the new uses for sheet zinc are in the manufacture of shingles and corrugated sheets. These in considerable quantity are now being used at home and exported the world over.

In rolled as well as in spun and drawn form, the use of zinc is multifarious and is rapidly growing.

The War Industries Board in its efforts to conserve for war purposes the use of other metals less plentiful than zinc, published a list of over 150 different channels in which zinc in its various forms can be advantageously utilized.

The high explosives sent abroad during the war were shipped in zinc-lined containers, because zinc resists atmospheric influence.

Without the zinc sender, an automatic telegraphic device, high-speed signaling through cables could not be done.

Rolled zinc is susceptible to a high, a dull or a frosted polish, and is easily formed into complicated shapes. It can be enameled or plated with gold, silver, nickel, or brass without annealing and given any of the finishes commonly used for brass or bronze articles.

Sheet zinc for sheathing in homes, factories, and farm buildings prevents molding and keeps out water, cold, and vermin.

The durability of zinc is almost axiomatic. Just as nature gives to the fur-bearing animals coats to protect them from the cold, so the weather gives to exposed zinc a thin and firmly adherent coating of basic carbonate, which completely protects it from the atmosphere.

The compounds of zinc have variable applications; for example: Zinc oxide (made by burning zinc in the air) is fast growing in favor as a pigment in paints, to the life of which it adds appreciably; it is essential to resiliency and durability in rubber automobile tires, comprising from 40 to 50 per cent of the whole in weight, and it is a valuable agent in pharmaceutical preparations.

Zinc chloride is used in medicine for cauterizing and as an astringent and disinfectant; in the arts, it serves as a preservative of wood, and as an etching medium; in microscopy, for differentiating fibres of silk, wool, and plants.

Zinc sulphate (a compound obtained by the action of sulphuric acid on zinc) is used in medicine as an astringent and an emetic and in electrogalvanizing lithopone (a dry white pigment made of zinc sulphate and barium sulphate) is used in wall paint and in making wall paper and linoleum.

Zinc dust (a powder obtained by atomizing molten zinc or by condensing zinc vapors) is used as a reducing agent in dye making and in cyaniding and sherardizing. It is also employed by naval vessels in making smoke screens.

Ad in AMERICAN ARTISAN Produces Results.

To American Artisan and Hardware Record:

You may stop my advertisement in your classified column as it has helped me find plenty of tools to fill my requirements. Many thanks to you.

Louis I. Drackert.

Tipton, Missouri, March 26, 1921.

Registers Trade-Mark for Fire Doors and Shutters.

Merchant and Evans Company, Philadelphia, Pennsylvania, has procured United States Patent Office registration, under number 141,237, for the trade-mark depicted herewith. The particular description of goods to which it applies is fire doors and shutters. The Company claims use since 1914.

claims use since 1914. The trade-mark is an easily distinguishable monogram of the Merchant and Evans Company.

Sells Set of Tinners' Tools Through AMERICAN ARTISAN.

To American Artisan and Hardware Record:

Kindly discontinue my advertisement of tools for sale.

I sold them today to a party in Sauk Rapids, Minnesota.

I had hardly opened the letter containing his check when the bank called me saying a party in Indiana had telegraphed a check to the bank to me for the same tools.

I had nine inquiries. I guess that's going some. Thank you.

L. Max Baugh.

Galva, Illinois, March 29, 1921.

Tells How Semi-Steel Is Made.

"A metal bearing the trade name of 'semi-steel' has been introduced during the last ten years," says a writer in *Power*.

"It is made by melting together about 30 per cent of mild-steel scrap and 70 per cent of pig iron.

"Manganese or other special fluxes are introduced in small amounts to improve the strength, toughness and machining qualities and to counteract the presence of impurities.

"A metal having a tensile strength of 35,000 pounds per square inch is produced by this process, but this may be considered only as a good grade of cast iron, and for that reason should not be used in connection with boiler work where the use of cast iron is prohibited."

Larson Wants Greenberg to Suggest a Hobby for Him.

To American Artisan and Hardware Record:

In reading the past week's issue of your paper, I was particularly attracted by an article saying that we should all have a pet hobby, written by Brother J. C. Greenberg.

I notice the interest he has taken in Jack Bowler and wish to say that it is a hobby of mine to read such hints.

It used to be a hobby of mine——when we could all get together—to take a good drink or two, which would always rest our overtaxed brains.

Since Brother George Harms and Brother Seabrook played their "trick" on me, it has been a mystery what my hobby should be.

The next time I talk to Brother Greenberg, I will ask him to suggest a hobby for me that will set my mind free.

Edward A. Larson.

Bloomington, Illinois, March 24, 1921.

Battle Creek Local Elects Officers.

At the annual meeting, held March 23rd, the Battle Creek Local of the Michigan Sheet Metal Contractors' Association elected the following officers for the ensuing term:

President: John Darlington;
Treasurer: M. L. Jones;
Secretary: Chris Jansen.

It is the intention of the newly elected secretary, Mr. Jansen, to take advantage of every form of publicity to forward the interests of the Battle Creek Local during his term of office.

Is Made Eastern Sales Manager of Zinc Company.

With an experience of twenty-eight years in connection with the Illinois Zinc Company, Willard Fisher has been appointed to act as Eastern Sales Manager of the American Zinc Products Company, Greencastle, Indiana.

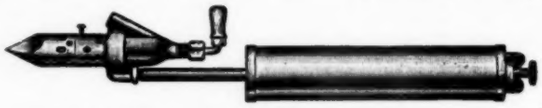
Mr. Fisher's headquarters are at the Company's New York office, 50 Church Street, for the sale of sheet zinc, plate zinc, and roofing material.

M. L. Filley of the American Zinc Products Company will remain as Manager of the local New York office.

Soldering Iron and Blow Torch That Keeps Itself Hot.

In the accompanying illustration we show an appliance which fills a long-felt want, to use a very hackneyed expression, but nevertheless a very apt one—a double duty tool that does away with much of the inconvenience of the old-fashioned, heavy soldering iron which has to be put on a furnace every so often to be reheated.

The manufacturers of the "Ever-Hot" Soldering Iron and Blow Torch state that it can be operated continuously for four hours before re-filling the tank which forms the handle, and that it weighs only 2½ pounds. They also state that it is equally efficient on light and heavy work, and that it operates perfectly in



"Ever-Hot" Soldering Iron and Blow Torch.

extremely cold weather or in high winds. A special introductory price for the month of April is offered. For further particulars address the Products Corporation, Department F, Maywood, Illinois.

Notes and Queries.

Slitting Shears Used With Brake.

From J. J. Preuss, 555 Sixty-Fourth Avenue, West Allis, Wisconsin.

Can you inform me where I can buy hand slitting shears that are used with a cornice brake?

Ans.—C. DeWitt Wagner, Cedar Rapids, Iowa.

Myer Door Track.

From Brechtl and Ring, Plain, Wisconsin.

Kindly give us the name and address of the manufacturer of the Myer door track.

Ans.—F. E. Myers and Brother, 900 Fourth Avenue, Ashland, Ohio.

Machine for Cutting Louvers.

From Brizee Metal Works, Twin Falls, Idaho.

We would like the name of a manufacturer of a machine for cutting louvers in automobile hoods.

Ans.—Joseph T. Ryerson and Son, 2558 West 16th Street, Chicago, Illinois.

Tailor Drycleaning Machines.

From Richard H. Boden, Garrison, North Dakota.

Can you tell us who manufactures tailor drycleaning washers and extracting machines, for either hand or power operation?

Ans.—Thor Sales Company, 4812 Broadway, Chicago, Illinois.

Sheet Brass in Rolls.

From Haas Brothers Auto Radiator Company, 120 Fifth Avenue, Clinton, Iowa.

Will you please inform us where we can buy sheet brass in rolls in Chicago?

Ans.—Merchant and Evans Company, 347 North Sheldon Street, Chicago, Illinois.

Tinners' Cornice Brakes.

From A. W. Johnson, 17 North Sixth Avenue, West, Duluth, Minnesota.

Kindly advise who manufactures or sells cornice brakes for tinners.

Ans.—Merchant and Evans Company, 347 North Sheldon Street, Chicago, Illinois; Niagara Machine and Tool Works, Buffalo, New York; Joseph T. Ryerson and Son, 2558 West 16th Street, Chicago, Illinois; Dreis and Krump Manufacturing Company, 2901 South Halsted Street, Chicago, Illinois; Bertsch and Company, Cambridge City, Indiana; Frederick J. Knoedler, 68 North Second Street, Philadelphia, Pennsylvania.

Nothing is more easy than to clear debts by borrowing.—Dr. Johnson.

It is not doing the thing we like to do, but liking the thing we have to do, that makes life blessed.—Goethe.

Illustrations of New Patents

Watch This Page. Keep Yourself Informed Concerning Improved Devices Which May Save Labor in Your Shop or Add Another Source of Income to Your Retail Store.

1,366,686. Baking Oven. Charles W. Zweily, Willow Springs, Ill. Filed January 31, 1919.

1,366,738. Heat Saving Device For Gas Stoves. Sidney James Thomas Long, Auckland, New Zealand. Filed August 28, 1918.

1,366,772. Clothes Boiler. Charles J. Dieteman, Olean, N. Y. Filed January 9, 1920.

1,366,801. Screw Action Wrench. Harry R. Hodge, Brooklyn, N. Y. Filed August 7, 1920.

1,366,840. Heater. Harry A. Scisinger and Emmett W. Adams, Chicago, Ill. Filed June 29, 1920.

1,366,871. Jar Opener. Richard H. Calkins, East Bloomfield, N. Y. Filed February 17, 1920.

1,366,872. Device for Supporting Cooking Utensils. Frank W. Cantleberry, Sisquoc, Calif. Original application filed October 24, 1918. Divided and this application filed January 12, 1920.

1,366,892. Oil Stove. Fred E. White, Gardner, Mass., assignor to Central Oil & Gas Stove Company, Gardner, Mass., a Corporation of Massachusetts. Filed January 3, 1919. Renewed July 19, 1920.

1,366,901. Stove. William J. Best, Detroit, Mich. Filed July 11, 1918. Renewed October 8, 1919.

1,366,909. Lock. Joseph P. Frommer, Toledo, Ohio. Filed August 13, 1919.

1,366,947. Gang Lawn Mower. Cleland Coldwell Ross, Newburgh, N. Y. Filed August 5, 1920.

1,366,962. Adjustable Work Support. Nicholas Schwagel, Dayton, Ohio. Filed July 21, 1919.

1,366,982. Coal Oil Burner. Robert J. Walker and John J. Shane, San Francisco, Calif.; said Walker assignor to said Shane. Filed November 1, 1919.

1,366,998. Vacuum Sweeper. Wilmer H. Yerkes, Pittsburgh, Pa. Filed June 25, 1920.

1,367,032. Sink Refuse Shovel. Guy W. Ferdon, Cresskill, N. J. Filed June 13, 1919.

1,367,064. Heater. Lawrence C. Lucas, Canton, Ohio. Filed June 8, 1918.

1,367,071. Combination Clamp. Anton Mazzanovich, Los Angeles, Calif. Filed December 11, 1919.

1,367,087. Cutting Tool for Use in Lathes, Planing Machines and the Like. William Robert Paige, Sheffield, England. Filed April 15, 1920.

1,367,100. Insect Trap. Ferdinand H. Schultz, Treynor, Iowa. Filed November 4, 1919.

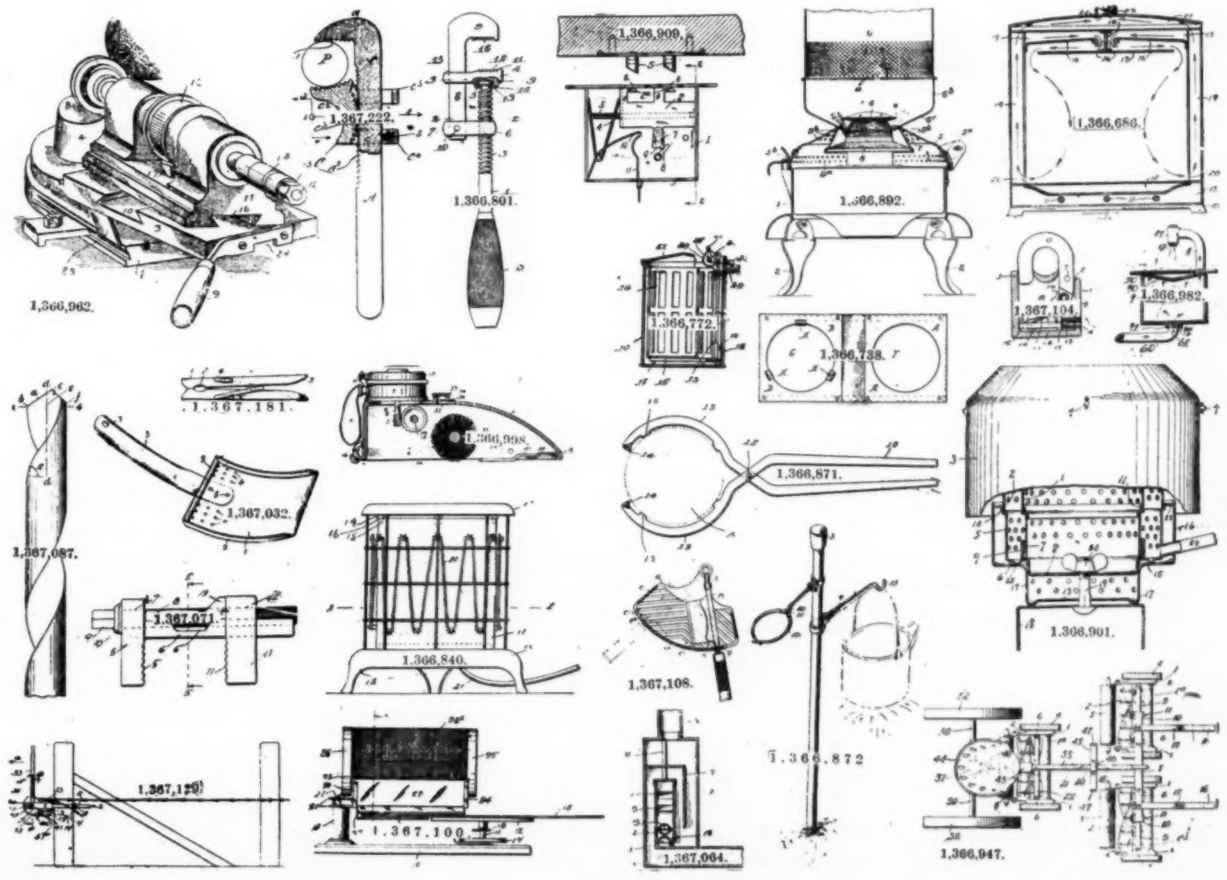
1,367,104. Padlock. Louis Snyder, Philadelphia, Pa. Filed May 28, 1920.

1,367,108. Safety Razor Blade Honing Device. Joseph Wakefield and Arthur Lamb, London, England. Filed February 17, 1920.

1,367,129. Wire Stretcher. Andrew Faist, San Francisco, Calif., assignor of three-fourths to Louise Grieger, San Francisco, Calif. Filed February 7, 1920.

1,367,181. Clothespin. Zollicoffer Fonville, Raleigh, N. C. Filed January 3, 1920.

1,367,222. Wrench. D. Walton Burnett Wilson, Stamford, Conn. Filed April 28, 1920.



Weekly Report of the Markets

General Conditions in the Steel Industry. Review of Prices and Tendencies in Sheet Metals, Pig Iron, etc.

PRICES OF STEEL CONTINUE PRACTICALLY UNCHANGED.

Two small bright spots made their appearance in the iron and steel industry last week.

One was a slight increase in structural steel orders and more releases on bar and strip steel contracts from automobile manufacturers notably the Ford Motor Company, the Studebaker Corporation, Dodge Brothers, the Cadillac Motor Company and others.

These releases, however, are not yet of enough volume materially to affect the operating rate of the mills.

Strip mill operations are at about 25 or 30 per cent of capacity. The recent demand for structural steel shows the greatest improvement but the total tonnage of contracts let was swelled by two or three unusually large orders that have been pending for some time so that it can not be said that any permanent improvement in the market has come.

The Chicago Union Station contract together with the Mail Terminal Building contributed almost 16,000 tons of fabricated steel to the total while municipal construction in Detroit accounted for 25,000 tons of steel over half of which was steel rails.

Of all the plants and mills of the leading interest the pipe and rail mills have the heaviest operating schedule.

The National Tube Company, however, has been forced to curtail still further and the plants of the company at Lorain, Ohio, have reduced operations 20 per cent by putting more than 8,000 men on shorter time.

The rail mills are down to 60 per cent of output. The American Steel & Wire Company, another subsidiary of the corporation, has reduced working hours at the Joliet, Dekalb and Waukegan plants.

This move, however, was for the purpose of giving work to as many employes as possible and for the time being the men at these three plants will be employed three days a week. Increased activity is reported at the Clairton steel works of the Carnegie Steel Company.

Steel.

The leading interest continues to quote the schedule of prices adopted March, 1919, and adhered to since and has made no reduction in wages.

Reports have been circulating in Wall Street during the past week or two that Judge Gary had left instructions for both price and wage cuts to be announced some time in April, and while he was on the Pacific Coast, but still other reports have it that no such change will be made for a long time to come.

John Skelton Williams, former controller of currency, has made public another letter calling on the leading interest to cut prices and charging that excessive prices for steel and iron have become an active cause for unemployment and of widespread suffering.

Among his claims is one that the desperate condition of the railroads is partly due to inflated prices that make new additions to equipment impossible.

In its annual report the United States Steel Corporation established a new record in 1920 for gross receipts, which amounted to $1,755,477,025, and exceeded the previous high record, made in 1918, by more than $11,000,000.

The net income for the year, after allowing $46,684,000 for depletion, depreciation and sinking fund totaled $130,002,534.

Copper.

The shutting down of some of the copper mines featured the industry last week. The first shutdown was that of the Old Dominion, followed by the North Butte, and then the Inspiration announced Thursday that it would close down its properties.

On Saturday the Phelps Dodge Company suspended operations at its Burro Mountain property, and stated that within two weeks its other properties would be idle.

This seems to be the beginning of a general movement on the part of the large copper producers of the country to put an end to producing and selling copper at a loss.

It will entail hardship on the population of the towns that have grown up around the individual mines, but a large percentage of the men will be put to work developing new reserves against the day of normal demand.

The Wolverine and Mohawk have again passed their dividends. According to the 1920 annual report of the Calumet & Hecla Mining Company an operating loss of $526,051 was shown, which, after miscellaneous receipts and a revaluation of copper on hand to 13 cents a pound amounted to a total loss of $3,823,743. The final deficit was swelled to $4,323,743, after paying one dividend of $5 a share on the 100,000 shares of stock. This compares to a loss of $652,286 in 1919. The copper output of the company in 1920 amounted to 57,627,883 pounds at a cost of 20.73 cents a pound, including 2.65 cents for depreciation and 2.74 cents for depletion.

The company had a sales supply of copper amounting to 90,077,442 pounds, including some 32,449,559 pounds left over from 1919, and of this amount 43,019,141 pounds were delivered at an average price of 19.43 cents a pound.

The weaker selling interests in the copper market are quoting 12¼ cents a pound for prompt delivery, and the larger producers 13 cents for March, April and May.

It is now evident that large producers are in earnest about refusing to sell any more copper at a loss and consumers who have not taken advantage of their

opportunities recently to obtain copper below the cost of production, are displaying more interest in covering requirements for March and April.

The future of the market depends largely upon the demand for finished products. Ultimate consumers have displayed very little interest in the last ten days but with the production-curtailment movement now in force demand may be stimulated.

Tin.

The outstanding feature in the tin market during the past week was the sharp advance which took the London price up to £173 and the domestic quotation to 30½ cents a pound.

But even now domestic prices are lower than at any time during the past 10 years with the exception of 1914 when it touched 28.50 and in 1918 as high as $1.10 was realized.

The technical position is strong in that production throughout the world is being curtailed but weak in that an enormous surplus has accumulated and the demand is extremely light.

However, the bulk of the world's tin supply is held in strong hands.

The Bolivian tin mine operators are holding their metal for 35 cents a pound, c. i. f. New York, and the Federated Malay States Government as well as that of Holland are holding substantial stocks for considerably higher prices than those now ruling the market.

The activity in the domestic and London tin markets is confined to dealers and speculators and it is understood that a large part of the recent buying of futures in London has been for speculative account here of traders anticipating a revival in consuming demand prior to the dates of delivery.

Lead.

The advance of London prices to over £20 has eliminated the possibility of the dumping of foreign lead on our market for the time being, at least.

There are signs of a better demand for lead in the near future from the recent revival, if such it can be called, in the automobile industry and building trades.

The market at present is dull, but a little more activity made itself felt last week.

This activity came from lead sheet and pipe makers, whose business has been comparatively light during the past few months, and from the battery, paint and cable trades.

Chicago prices have gone up 10 points, American pig lead having advanced from $4.40 to $4.50 per hundred pounds and bar lead from $5.15 to $5.25 per hundred pounds.

Solder.

An increase of 75 cents per hundred pounds has taken place in Chicago solder prices. The quotations now in effect are as follows: Warranted, 50-50, per hundred pounds, $20.75; Commercial, 45-55, per hundred pounds, $19.25; Plumbers', per hundred pounds, $18.00.

Zinc.

The domestic zinc market opened up weak on Monday, buyers bidding only as high as 4.50 cents, St. Louis 4.62½ cents a pound, being a fair settling price.

The nominal New York settling price is about 10 points off, or 5 cents.

Zinc receipts in St. Louis last week amounted to 33,040 slabs, as against 37,500 the week prior, while receipts since the first of the year totaled 629,420 slabs, as compared with 1,248,560 for the corresponding period last year.

St. Louis shipments last week were 39,850 slabs, as against 64,570 the week previous, while shipments since Jan. 1 total 768,050 slabs, as compared with 1,643,510 slabs during the corresponding period last year.

Chicago price of zinc in slabs declined from $5.20 to $5.15 per hundred pounds.

Sheets.

There are no signs of anything like active demand for sheets for building purposes. The metal lath people are doing very little and there is not much in roofing and siding.

A decidedly fair line of activity is in galvanized sheets for culverts. This buying, by the way, accounts for many of the reports of galvanized sheets selling at what appear to be very low prices.

Galvanized sheets have undergone price reductions in Chicago amounting to 35 cents per hundred pounds.

Tin Plate.

The tin plate market, for production plate, remains at $7.00 per base box, 100-pound. As for months past tin plate can be bought from stocks held in second hands at various lower prices, say between $5.00 and $6.00.

Evidently the trade does not want this tin plate to any extent or it would all have been moved long ago.

The tin plate mills are holding out with their $7.00 price because they have nothing else to do. It would be impossible to stimulate buying by making slight price concessions, since the making of one concession would simply stiffen the consumer to wait for an additional concession and so on. The market could be stabilized at a new price only through the means of a reduction by the Steel Corporation, and the corporation seems altogether indisposed to reduce any particular commodity.

Old Metals.

Wholesale quotations in the Chicago district which should be considered as nominal are as follows: Old steel axles, $14.50 to $15.00; old iron axles, $24.00 to $25.00; steel springs, $12.50 to $13.00; No. 1 wrought iron, $11.00 to $11.50; No. 1 cast, $14.00 to $14.50; all per net tons. Prices for non-ferrous metals are quoted as follows, per pound: Light copper, 7 cents; light brass, 4½ cents; lead, 3 cents; zinc, 2½ cents; cast aluminum, 10 cents.

Pig Iron.

According to one large pig iron interest, the past week has been the most encouraging so far this year.

While the week has developed no radical features, an increased interest in pig iron is being shown quite generally throughout the country.

Jobbing foundries that have been closed for months are preparing to resume operations. Some, which were running two days a week, have increased to three.

Current Hardware and Metal Prices.

AMERICAN ARTISAN AND HARDWARE RECORD is the only publication containing Western Hardware and Metal prices corrected weekly.

The prices and discounts quoted on this and the following pages, are, for the most part, subject to change without notice. Owing to the unsettled conditions of the markets and the shortage of materials it is practically impossible for any manufacturer to guarantee his prices for any given length of time.

METALS

PIG IRON.

Northern Fdy. No. 2	$25 70
Southern Fdy. No. 2	33 17
Lake Sup. Charcoal	38 50
Malleable	27 20

FIRST QUALITY BRIGHT TIN PLATES.

			Per Box
IC	14x20	112 sheets	$12 60
IX	14x20		14 55
IXX	14x20		15 70
IXXX	14x20		16 90
IXXXX	14x20		18 10
IC	20x28		25 20
IX	20x28		29 10
IXX	20x28		31 40
IXXX	20x28		33 80
IXXXX	20x28		36 20

COKE PLATES

Cokes, 180 lbs.		20x28	$16 30
Cokes, 200 lbs.		20x28	16 50
Cokes, 214 lbs.	IC	20x28	16 85
Cokes, 270 lbs.	IX	20x28	18 75

BLUE ANNEALED SHEETS.

Base .....per 100 lbs. $4 68

ONE PASS COLD ROLLED BLACK.

No. 18-20	per 100 lbs.	$5 20
No. 22-24	per 100 lbs.	5 25
No. 26	per 100 lbs.	5 30
No. 27	per 100 lbs.	5 35
No. 28	per 100 lbs.	5 40
No. 29	per 100 lbs.	5 50

GALVANIZED.

No. 16	per 100 lbs.	$5 65
No. 18-20	per 100 lbs.	5 80
No. 22-24	per 100 lbs.	5 95
No. 26	per 100 lbs.	6 10
No. 27	per 100 lbs.	6 25
No. 28	per 100 lbs.	6 40
No. 30	per 100 lbs.	6 90

BAR SOLDER.

Warranted,
50-50.....per 100 lbs. $20 75
Commercial,
45-55.....per 100 lbs. 19 25
Plumbers'.....per 100 lbs. 18 00

ZINC.

In Slabs.....$5 15

SHEET ZINC.

Cask lots.....13c
Less than cask lots.....13¼-13½c

COPPER.

Copper Sheet, mill base....$0 20

LEAD.

American Pig.....$4 50
Bar 5 25
Sheet.
Full coils.....per 100 lbs. $7 50
Cut coils.....per 100 lbs. 7 75

TIN.

Pig tin.....32¼c
Bar tin.....34¼c

HARDWARE

ADZES.

Carpenters'.
Plumbs.....Per doz. $29 00
Coopers'.
Barton's .....Net
White's .....Net
Railroad.
Plumbs.....Per doz. $30 00

AMMUNITION.

Shells, Loaded, Peters.
Loaded with Black Powder, 18%
Loaded with Smokeless Powder 18%
Winchester.
Smokeless Repeater Grade, 15%
Smokeless Leader Grade...15%
Black Powder.....15%
U. M. C.
Nitro Club.....18%
Arrow 18%
New Club 18%
Gun Wads—per 1000.
Winchester 7-8 gauge 10&7½%
" 9-10 gauge 10&7½%
" 11-28 gauge 10&7½%

Powder.	Each
DuPont's Sporting, kegs	$11 25
" ¼ kegs	3 10
DuPont's Canisters, 1-lb.	56
" kegs	22 00
" ¼ kegs	5 75
" canisters	1 00
Hercules "E.C.," kegs	22 50
Hercules "Infallible," 25-can drums	22 00
Hercules "Infallible," 10-can drums	9 00
Hercules "E.C." and "Infallible," canisters	1 00
Hercules W. A. 30 Cal. Rifle, canisters	1 25
Hercules Sharpshooter Rifle, canisters	1 25
Hercules Bullseye Revolver, canisters	1 00

ANVILS.

Solid Wrought...23 & 23½c per lb.

ASBESTOS.

Paper up to 1/16.....10c per lb.
Millboard 3/32 to ⅛..10½c per lb.
Corrugated Paper (250 sq. ft.).....$6.50 per 100 lbs.
Rollboard .....11c per lb.

AUGERS.

Boring Machine.....40@40&10%
Carpenter's Nut.....50%
Hollow.
Bonney's.....per doz. $30 00
Post Hole.
Iwan's Post Hole and Well...30%
Vaughan's, 4 to 9 in. .....per doz. $14 00
Ship.
Ford's .....Net

AWLS.

Brad.		
No. 3 Handled	per doz.	$0 65
No. 1050 Handled	"	1 40
Patent asst'd, 1 to 4	"	85
Harness.		
Common	"	1 05
Patent	"	1 00
Peg.		
Shouldered	"	1 60
Patented	"	75

Scratch.
No. IS, socket Handled .....per doz. $ 2 50
No. 344 Goodell-Pratt, list less.....35-40%
No. 7 Stanley...per doz. $ 2 25

AXES.

First Quality, Single Bitted, 3 to 4 lb., per doz. 16 50
First Quality Double Bitted .....per doz. 22 50
Broad.
Plumbs. Can. Pat., 6-lb. 65 00
Single Bitted (without handles).
Plumbs, 4½-lb..... 19 50
Double Bitted (without handles).
Plumbs, 4½-lb..... 23 50

BAGS, PAPER, NAIL.

Pounds ..	10	16	20	25
Per 1000..	$5 00	6 50	7 50	9 00

BALANCES, SPRING.

Sight Spring.....Net
Straight .....Net

BARS, WRECKING.

V. & B. No. 12.....$0 45
V. & B. No. 24..... 0 75
V. & B. No. 324..... 0 80
V. & B. No. 30..... 0 85
V. & B. No. 330..... 0 90

BASKETS.

Clothes.	
Small Willow...per doz.	$15 00
Medium Willow. "	17 00
Large Willow... "	20 00

Galvanized.	1 bu.	1½ bu.
Per doz.	$16 08	$18 72

BEATERS.

Carpet.	Per doz.
No. 7 Tinned Spring Wire	$1 10
No. 8 Spring Wire Coppered	1 50
No. 9 Preston	1 75
Egg.	Per doz.
No. 50 Imp. Dover	$1 10
No. 102 " " Tinned	1 35
No. 150 " " hotel	2 10
No. 10 Heavy hotel tinned	2 10
No. 13 " " "	3 30
No. 15 " " "	3 60
No. 18 " " "	4 50

Hand.				
	8	9	10	12
Per doz.	$11 50	13 00	14 75	18 00

Moulders'.
12-inch .....Per doz. 20 00

BELLS.

Call.
3-inch Nickeled Rotary Bell, Bronzed base....per doz. $5 50
Cow.
Kentucky 30%

Door.	Per doz.
New Departure Automatic	$7 50
Rotary.	
3 -in. Old Copper Bell	6 00
3 -in. Old Copper Bell, fancy	8 00
3 -in. Nickeled Steel Bell	6 00
3½-in. Nickeled Steel Bell	6 50

Hand.
Hand Bell polished List plus 15%
White Metal..... " 15%
Nickel Plated..... " 5%
Swiss ..... " 10%
Miscellaneous.
Church and School, steel alloys 30%

Farm, lbs..	40	50	75	100
Each	$3 00	3 75	5 50	7 25

BEVELS, TEE.

Stanley's Rosewood handle, new list .....Nets
Stanley iron handle.....Nets

BINDING CLOTH.

Zinced 55%
Brass 40%
Brass, plated.....60%

BITS.

Auger.
Jennings Pattern.....Net
Ford Car.....List plus 5%
Ford's Ship..... " " 5%
Irwin 35%
Russell Jennings.....plus 20%
Clark's Expansive.....33⅓%
Steer's " Small list, $22 00..5%
" " Large " $26 00..5%
Irwin Car.....35%
Ford's Ship Auger pattern Car .....List plus 5%
Center 10%
Countersink.
No. 18 Wheeler's..per doz. $2 25
No. 20 " .. " 3 00
American Snailhead " 1 75
" Rose ... " 2 00
" Flat .... " 1 40
Mahew's Flat .... " 1 60
" Snail ... " 1 90
Dowel.
Russel Jennings.....plus 20%
Gimlet.
Standard Double Cut Gross $3 40
Nail Metal Single Cut .....Gross $4 00—$5 00
Reamer.
Standard Square.....Doz. $2 50
American Octagon... " 2 50
Screw Driver.
No. 1 Common..... 30
No. 26 Stanley..... 75

BLADES, SAW.

Wood.			
Disston 30-in. Nos.	6	66	36
	$9 45	$10 05	$9 45

BLOCKS.

Wooden 20%
Patent 20%

BOARDS.

Stove.	Per doz.
24x24	$13 65
26x26	16 05
28x28	18 85
30x30	21 30
33x33	25 50
36x36	30 50

Wash.
No. 760, Banner Globe (single) .....per doz. $5 25
No. 652, Banner Globe (single) .....per doz. 6 75
No. 801, Brass King, per doz. 8 25
No. 860, Single—Plain Pump 6 25

BOLTS.

Carriage, Machine, etc.
Carriage, cut thread, ⅝x6 and sizes smaller and shorter 40-10%
Carriage sizes larger and longer than ⅝x6.....40-5%
Machine, ⅝x4 and sizes smaller and shorter...50-10%
Machine, sizes larger and longer than ⅝x4.....50%
Stove 65-10%
Tire 50%
Mortise, Door.
Gem, iron.....5%
Gem, bronze plated.....5%